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EDWARD MARTIN Governor

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NATURAL BOUNDARIES FOR CONSERVATION PLANNING

Dr. T. H. Langlois, Chief of the Fish Section of the Ohio Division of Conservation and Natural Resources, suggests the State Conservation Departments, the Soil Conservation Service, and other conservation agencies should establish natural geographic divisions as units for a well-rounded conservation program. He points out that watersheds are natural geographic districts, while counties frequently have purely arbitrary man-made boundaries. He says, "It would be much more logical to set up programs within each watershed district for the establishment of the essential soil conservation, practices a program for reforestation, and a program for education, based on the wellrounded conservation program for that specific district."

There is much food for thought in Dr. Langlois' suggestion.—Outdoor America.

BIG TROUT DROWNED BY SMALL SUNFISH

A four and a half inch sunfish was credited with killing—by drowning—a 29-inch, nine-pound trout believed the largest of its type in Harvey's Lake.

The tiny sunfish became wedged in the trout's gill, preventing it from breathing by taking the oxygen from water passing through the gill. The trout was salvaged by Charles Randall, whose wife saw it floating off shore. He placed it on exhibition at his pier before sending some of the scales and the measurements to the State Fish Commission.

GOOD FISHING BETWEEN BRIDGES

A remarkable fishing record in French Creek has been established by three experienced nimrods from McKees Rocks, Pa. These three fishermen have known and favored French Creek in the neighborhood of Cambridge Springs for many years, but have always come here in the summer. This year they decided to change their tactics and attack the finny tribe in the late fall months.

Their catch when inventoried as they were preparing to return to their homes, proved that their change in tactics was sound judgment.

They had taken a 40-pound muskie, and also 10 yellow salmon weighing from five to ten pounds each.

One of the remarkable features of this excellent catch was that these splendid specimens were taken right in the heart of Cambridge Springs. "Most of the catch came from the area between the Main Street and the Grant Street bridges," said the nimrods. George Strasser, 413 Chartiers Avenue,

George Strasser, 413 Chartiers Avenue, was the man who caught the muskie, after a struggle of half an hour. When the fish

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Dear Sirs:

Please find the enclosed dollar to continue my subscription to The Angler. I am going into the army now, so I am afraid I will not be able to make as good use of your fine work as I have in the past. I got my start in trout fishing from the articles in The Angler and the many fine stories and articles on light lure casting helped from the basis point of view. I am looking forward to the time when I will again be home reading The Angler and fishing the lakes and streams of our great STATE.

Thank you,

HENRY A. FRYE,

Narberth, Pa.

Dear Mr. Fox:

I have read several articles in The Pennsylvania Angler about the plug, Shakespeare Midget Spinner. I have been using this plug for several years and have had good luck with it. Recently while plugging in the Raystown Branch of the Juniata River, I caught a 15 inch sucker on it. I had never caught a sucker on a plug before and never heard of anyone else catching one on a plug. It was hooked directly in the mouth. I was fishing in deep water. Is this a rare occurrence or are suckers often caught on plugs?

Very truly yours,
FRANK W. FEIGHT,
Everett, Pa.

Dear Charlie:

With reference to your opening paragraph, my fishing has been rather limited, but some of it was the type that one will remember as long as he lives. Had two days on the Gunnison during our Colorado State convention in early July, and a week in Yellowstone Park and vicinity, following the Jackson Hole inspection trip on August 16th and 17th. The latter was really some of the finest dry fly fishing it has ever been my privilege to enjoy.

Took 19 trout above 2 lbs., with $3\frac{1}{2}$ as the top, and numerous ones from 1 to 2 lbs. There were plenty of fish there for a properly presented dry fly, but they wouldn't take just any old thing. The enclosed snap of my first two on the Firehole River may be of interest. I mention also, that, as usual, I did not carry a creel, and except for a $3\frac{1}{2}$ -pounder and a 3-pounder, kept on another day for a special purpose, all the other fish, large and small, were returned carefully to the water so they would be there for the next angler.

Please say hello to Charlie and Stack, and the others around the office, and tell them that we have many fine comments on the Pennsylvania Angler, as an interesting and worthwhile publication.

Sincerely yours,

KENNETH A. REID,

Executive Director of
Isaak Walton League of America, Inc.

"DOLOMIEU"

ANONYMOUS

STARTING off on the right track, if Old Jerry Hockins hadn't been so curious about a pair of fish that had taken up residence in a deep flat of the creek within a stone's throw of his front door step, this fish "dope" would never have been set down in black and white.

Make no mistake about it, Jerry was first of all, a fisherman. Relying on primitive angling methods that perhaps had been transmitted by generations of fisherman, ancestors, clear back to those slightly (if at all) clad predecessors of the stone age, Jerry carried on. When the bass were hitting crabs (crayfish, to you scientifically inclined Waltonians) it was a safe bet that you'd find this bearded disciple of the angling art using peeled crabs. He was first, last and particularly, a bass fisherman. In this respect, he was one of a vast host of American professional men, working men and the younger generation of our Democracy who have placed on a piscatorial pedestal, our native game fish-the smallmouthed bass. At some time or another you've heard or read of the smallmouthed bass-that mottled game fish of our rock bottom streams and lakes. Perhaps, too, you've been given to understand that of all of the American fresh water game fishes, it stands first in the affections of Uncle Sam's anglers. Slashing, savage strike, swift, startling lunges from the surface when hooked, and game to the very core-of course, you've heard of it.

But, coming back to Jerry. As a practical bass fisherman who had taken his share of these bronze warriors from streams on which he had spent the greater part of his life, there were certain laws, regulations, to be more polite, relative to their taking that he found difficult to figure out—opening of the bass season, for instance. That pair of bass at his front door, or practically that, anyway, accomplished a whale of a lot in clearing up his perplexity. How? Well, here's the story.

One of those fellows connected with the fish department in his home state happened upon Jerry at an inopportune moment one day. Now, this fellow was not an enforcement officer. Had he been, it is probable that Jerry might have had a lot of explaining to do. For our veteran angler had just yanked a four-pound smallmouthed bass from its chosen retreat and would have, without doubt, proceeded forthwith to accommodate a frying pan with said bass. No question about it, Jerry was rather sheepish as an immediate result of the episode. The bass was returned hurriedly to the water and immediately returned to the cove from which it had been taken. And chiefly because the fish man explained to Jerry just why that bass was so "all-fired fussy" about its home quarters in the balmy month of June, the following events are recorded.

There wasn't, after all, so much to tell to Jerry, the bass fisherman. He knew the feeding habits of the smallmouth pretty much from A to Z; knew that during the sultry months of July and August, pretty nearly the only natural lure that could be counted on in taking them was the soft-

shelled crab or crab with the back shell peeled off. Certainly he knew the moodiness of this superb game fish, how on one day (or even morning) it would strike savagely at silver shiner or run chub, and probably on the next day (or that same evening) disregard any natural lure save an active stone catfish. He had mastered the trick that most old fishermen know, when bass are striking short, to hook the bait through the back, the better to set the hook on the first run of the bass.

At any rate, the fish fellow talked, and Jerry was all ears. He heard that the bass in this northern water, with the advent of late autumn days and a drop in water temperature in the stream, secluded themselves in sunken hollow logs or beneath boulders or rock ledges, there to remain until the water temperature rose in spring, usually in



Many were the times Old Jerry Hockins thrilled at the sight of a jumping bass.

late April or early May. It was explained that the adult bass, prior to their hibernation period, fed voraciously, storing up a surplus of fat and tissue (much as does the bear of the animal kingdom) upon which they could draw during the dormant period; how, upon emerging from dormancy, these spike-finned battlers entered upon another savage feeding splurge—driving the minnow schools into the shallows, the silver shiners, in their frantic efforts to escape, skipping over the water like flat stones skimmed across its surface. This Jerry had seen during the month of May.

And all this vast scheme was nature's plan for preserving the bass, he was told. Unless fat and tissue sufficient for them to winter through was stored up, the fish might never come through the dormant period; or, if they did, the females might have been rendered sterile through having had an insufficient supply of nourishment for the eggs. In the spring, with spawning time near, their craving for food was intensified by the rapid development of eggs in the females and milt, or sperm, in the males. In this stream, by the latter part of May, the adult bass were ready to spawn, and final preparation for the spawning period was as interesting as the spawning itself. Just as in the animal kingdom, the red fox, generally recognized as the most intelligent form of mammal life, pairs off for reproduction, the fish fellow told Jerry, so does the smallmouthed bass, *Micropterus dolomieu*, in the fresh water:

Jerry interrupted, "What was that high-falutin' name you give that fish I jest caught?" he inquired.

"Micropterus dolomieu."

"Too long a word," said Jerry, "I'm jest acallin' that fish dolomieu."

And, as the following account is simply a summarizing of Jerry's observations from the episode of the taking of the bass from its nest until three weeks later, only a few additional details are needed to bring this bass saga up to the minute.

In preparing the nest for eggs and young, the male fish selects a site, usually at the base of an old sunken log, a rock ledge or boulder. Backed against this protection from the rear, he is more than a match for virtually anything with fins. Over a bar of pebbles or gravel he labors diligently. By a combination of tail-sweeping, fanning with his pectoral fins and carrying off any alien piece of wood or refuse in his mouth, he clears away a space varying in diameter from twenty-four to thirty inches. The prepared nest is saucer-shaped, ideal for the intended purpose.

After the nest has been prepared, the male sets forth to find a mate. Returning with her to the nest, the act of reproduction takes place. As the female extrudes the eggs by clutches, the male hovers over them, fertilizing them. After from one thousand to three thousand eggs are deposited on the nest (dependent upon the size of the female bass) she leaves and, (fickle thing), may even seek another nest to deposit the balance of the eggs.

From this point henceforth, the male bass is ideal parent personified. During the period in which the eggs are hatching, varying from six to twelve days in the northern hemisphere and dependent mainly upon existing water temperature, and during the subsequent development of the young bass past the nest stage, the male guards that nest with his life.

All of which brings us back to Jerry.

When the fish man left Jerry, this veteran bass fisherman was in a fuddle. In the past, he had known that some of the finest bass taken had been caught during the month of May, or in other words, when they were preparing for spawning. If what he had heard was true, this was wrong, dead wrong, and could result only in spoiling not only his fishing for this king of fresh water game fish, but the fishing of his fellow anglers. He determined to watch that four pound smallmouthed bass on its nest, to gather at first hand the truth or falsity of the fish man's statement. What he observed is an interesting annal for any fisherman's notebook. It explains a lot about restrictions and has a mighty heavy bearing on that word we hear so much nowadays "conservation."

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FLY FISHING FOR BLACK BASS

Wet or Dry, the Artificial Insect Gets a Smashing Reception From the Small-Mouths of Pennsylvania

By DICK FORTNEY

THE black bass of Pennsylvania's rivers and creeks have established such a reputation as fire-eating killers—demanding the biggest and most lively or noisy artificial lures and live bait—that anglers pretty generally overlook the fact that this fish also is a worthy antagonist of the fly fisherman.

Fly fishing for bass is one of the most interesting phases of angling—because a wide variety of lures can be used and because the black bass is a fish of many moods.

Insects make up a considerable portion of the diet of a bass. This fish has a special liking for large bugs which float and flutter on the surface of the water, and they also will freely take smaller insects, even down to the size of the nymphs, which float submerged.

In the order of their popularity and effectiveness during the last couple of summers, my favorites for bass fly fishing are the large floating dry fly, the bass bug made of deer hair or cork, the large wet fly which is used with a spinner, and streamers of various patterns. I have taken bass, and some really nice bass, consistently with all of them—and I have found them vastly more fun to use than casting rod lures or live bait.

Incidentally, I have come to the conclusion that in fly fishing for bass it is necessary to carry all types of lures—simply because the feeding mood of a bass can change from minute to minute and a lure which has been producing good results for a couple of hours suddenly can lose all its attraction.

One dark night last summer the bass hit fairly well on a small, gray bug made of deer hair until about 10 o'clock, and then they quit. I noticed that as the hours passed the bug had to be handled more and more carefully, until finally it was simply permitted to float with the current without being twitched or moved in the slightest.

When half a dozen casts with the bug failed to produce action I changed lures, replacing the bug with a dry fly which we call the powder puff because it consists of nothing more than half a dozen white hackles of large size wrapped on a fairly large hook, producing a bulk about the diameter of a half dollar that floats high and dry no matter how swift or broken the current.

Half a dozen casts with this new lure also failed to produce a rise. The fly had become a bit wet and on the seventh or eighth cast it sank into the water when it reached the end of the float. I began retrieving the lure with long, swift sweeps of the rod tip—and on the second or third twitch there was a hard strike, and a bass a foot long began ripping around the pool.

After this fish was netted the fly was again cast into the current without being dried, again retrieved with the same action,

and a second bass was hooked. The third time the big dry fly was fished wet it was smacked by the biggest fish of the night, a plump fifteen-incher.

There were demonstrated two different methods of using this single type of fly. And there was explained the failure of the bass bug. The bass obviously had quit surface feeding but still were on the prowl down deeper in the stream.

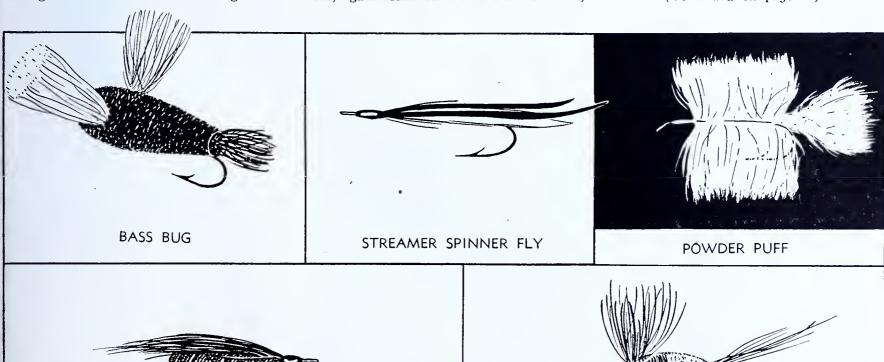
The powder puff, however, is by no means my favorite fly for black bass. Fished wet or dry, it has produced some nice catches, but I never have found it effective except in the dark of night, and most of the time it has failed to be a consistently good lure.

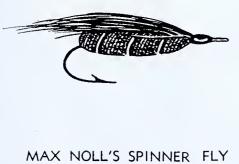
Let's call it, instead, a sort of ace in the

No. 1 fly for bass in my jacket pocket is a lure at which you'd turn up your nose in a showcase tray. It was "born" one night when I was just fussing around my tying table, in one of those experimental moods which occasionally grip all amateurs.

The fly is constructed on a size 8 hook with a shank of medium length. The body is made of deer hair, tied on the hook shank in little bunches and then clipped off close, in the manner of bass bug construction. The tail is a small tuft of deer hair, fanning out over the bend of the hook, and the "legs" are made of two or three long, stiff saddle

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WHEN THE WILLOW-GRASS BLOOMS

By W. R. WALTON

In MOST clean, warm-water streams of the eastern United States, grows a willow-like plant, about knee high on a tall man, botanically, Dianthera americana Linn. (Figure 1) Botanists dub this the "water-willow," but to most anglers this is the "willow-grass." Truth is that it is neither a willow nor a grass but a member of the botanical family Acanthaceae which is far removed botanically, from both the grass and willow families.

Friendly alike, both to fish and fishermen, it sends forth its creeping submerged rootstocks over the rocks and gravel, grasping every crack and cranny so firmly that neither roaring flood or grinding ice may uproot it.

silt and soil to the underlying rocks, thus facilitating the formation, at summer stage, of the rushing rapids and riffles so dear to the hearts of the bass and the fly-caster alike. Among its submerged stems aquatic insects and mollusks hold carnival while dragon flies flit in myriads among its nodding blooms.

The wading fisherman soon learns to step trustingly upon its matted stems among treacherous, slippery rocks, with confidence that it will not let him down. Under the lee of the willow-grass patches and even among its waving stems lurks old bronze back seeking whom he may devour. Thus come we at last to the burden of our song.

my experience. Here, in streams having many riffles and rapids, and hence well aerated water, my luck with fly and spinner, has been best on the hottest days during the most heated period of the summer. Furthermore, frequently the larger number of fish have been taken in the middle of the day or from 11 until 2 P.M. At such times the water was so tepid as to permit wading waist-deep all day in perfect comfort. Be it emphasized now, that I am speaking of rapid, well aerated streams where the fish at this time are found lying in the riffles—the story in lakes and ponds may be an entirely different tale.

Many patterns of flies are lethal to the smallmouth at this period, such as Colonel Fuller, McGinty, and Lord Baltimore, while one of my friends, who is mighty successful, swears by the Silver Doctor exclusively. All of these are good warm-weather flies but I crave to add to this distinguished assembly an old pattern which one does not see mentioned often, and I refer to the Golden Pheasant.





Willow grass is firmly entrenehed along our streams.

Its bloom, a cluster of small purple or lavender flowers, appears in Pennsylvania, Maryland and Virginia, from mid-June to August, or in the exact period during which the smallmouth bass rises most readily to the fly.

Dianthera tends to form islands by binding

Often in angling literature we find it stated, or inferred, that the smallmouth is a denizen of the cold water and that he strikes most readily after the water cools in the fall. As a fly fisherman of the streams in the central Atlantic States, for "lo these many years," this decidedly has not been



The author exhibits a fine smallmouth taken on the fly rod.

Golden pheasant fly



I tie this on a number 1, model perfect, standard shank hook. The tip, at the bend of the shank, is of flat gold tinsel, about 3 turns. And, by-the-way, I wonder how many amateur fly tyers know an easy trick of putting this on smoothly without a hump where it is tied in? Judging from several letters received on the subject, this is not common knowledge. Most instruction books advise the neophyte to trim the tinsel to a point before tying in, but when tinsel is moderately, to very wide that operation fails lamentably to solve the problem. My favorite way is, after trimming to a point, to double the tinsel back on its self as in figure 2, then pressing the fold with the thumb nail, firmly down against the hook shank. This places the long axis of the tinsel at right angles to the shank and makes it easy to wind either forward or back as

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THEORY OF MULTIPLE STRIP ROD CONSTRUCTION

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By DAN BRENAN

HEXAGONAL construction is standard present-day practice. Each section is made up of 6 identical strips and each strip has an interior angle of exactly 60°. But we frequently hear the question, why 6 strips? Why not 4 or 8 or 5 strips? We will attempt to find the answer.

When the fiber structure of a bamboo rod

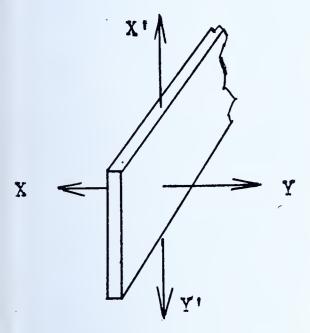
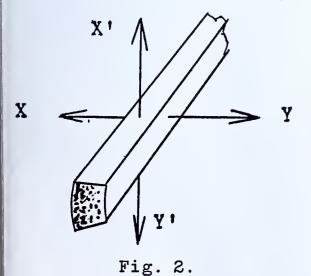


Fig. 1.

is flexed or bent out of its normal state of rest it immediately seeks to return to that state of rest in response to its resistance to distortion. This is the inherent characteristic we define as elasticity or resiliancy. The measurable extent of resiliancy exhibited by a strip of bamboo (or any conceivable combination of strips) depends on the angular relationship of the plane of the distortive force (plane of flexation) to the grain of the fiber structure.

Let us make our meaning clearer with an ordinary yard stick. Bend the stick through



the plane x-y (fig. 1). Now turn it edgewise and try to bend it through the vertical plane x'-y'. Now try the same experiment with a roughly squared strip of bamboo (fig. 2). The yard stick bends easier through the plane x-y because of its shape. If the cross section diameters were equal it would bend almost as easily through one diameter as the other because the fiber densities are nearly uniform.

But the bamboo strip, although almost squared, shows no such characteristic. The greatest fiber density is found in that part directly underneath the outer enamel surface and the deeper into the strip we penetrate the less the density. When the plane of flexation occurs through x-y the hard, dense fiber is spread out, so to speak, in a thin plane and the resistance to distortion is consequently at a minimum; just as it would be in a thin strip of metal under a similar stress. But when the plane of flexation is parallel to the plane of greatest density, as in x'-y', the resistance to distortion is multiplied many times.

This attribute is not fortuitous. It is, rather, a manifestation of nature's subtle design for a specific purpose. Figure 3 represents a cross section of the growing culm in the natural state. Imagine, if you will, the culm growing on a hillside in semitropical south China, ever-subject to the destructive hazards of storms or hurricane force. Lacking a balanced resiliency, the culm would either be flattened to the earth like so much wheat straw or broken off like a withered corn stalk (both botanical cousins of the bamboo culm). Nature's design anticipates the inevitable emergency; for, no matter from what direction the storm may come, the shaded area in the figure provides

distance in a vertical plane then the free end will twist over in a 90° arc, or torque, in response to the tendency of the line of force to find the plane of least resistance. Since the plane of greatest resistance is always parallel to the enamel face it follows that the designer's problem is so to arrange the strips that the utmost utilization may be made of this fact and that the tendency

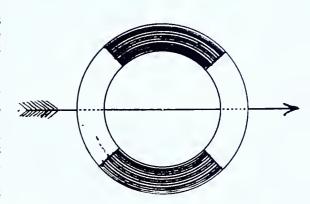
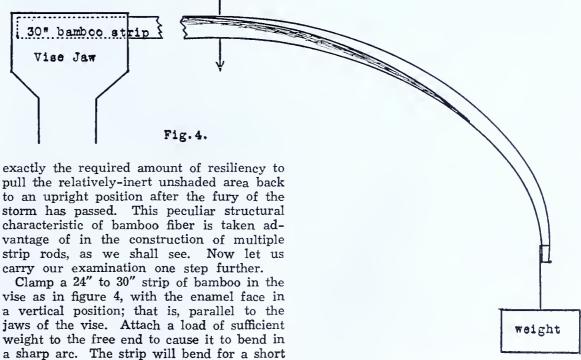


Fig. 3.

toward torsional twist may be minimized or totally eliminated; for the moment the strip (or strips) turns over as in Fig. 4 it loses the major part of its potential propulsive force. This basic physical law, as applied to bamboo fiber, is the foundation stone on which the entire theory of power generation through multiple strip construction is based. Supplementing this law, as we shall presently find, is the additional principle that there must be as close an approach as possible to a symmetrical distribution and balance of fiber densities.

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Those SPRINGTON BLUEGILLS By JACK BUTLER

THE weather this afternoon was all that could be desired of a Mid-Autumn afternoon and with an extra quart or so of gas we drove out to Springton Reservoir, just for a look see at one of our favorite (when all others fail) fishing spots.

The sun was dazzling and a few fleecy, snowy white clouds made the cobalt blue sky seem more vivid by way of contrast. The water was as slick as a mirror, reflecting the bright hues of the surrounding foliage—the oranges, crimsons and the ochres were slashed here and there with brilliant yellows. A few bright green leaves still interspersed the other bright coloring and combined with the evenly spaced sombre evergreens made the setting truly magnificent. At the Bishop's Hollow Road Bridge there were six men and two boys fishing

and at the Gradyville Road Bridge there two fishermen.

Our good wife, who was along, after a few gasps at the splendor and beauty of the scene was moved to ramark, "it's no wonder you chaps are so crazy to come out here fishing."

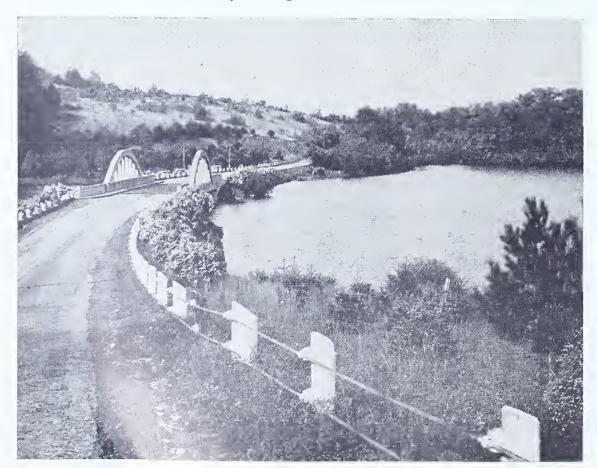
Seeing the fishermen made me wish for the tackle, which fortunately had been left at home, I would have been late for work otherwise, and by leaning over the concrete abutments of each bridge and gazing straight down into the shady parts of the water we saw several schools of my pals—the bluegills. A sort of nostalgia came over me as I reviewed the pleasurable times I spent at these two spots during the past season.

Some rate the Atlantic Salmon the king of fish taken in fresh water. There are others who insist it is the brook trout, the steel-head or the grayling—fishermen never agree —but all must agree that every royal family, piscatorial or otherwise, must, somewhere near the bottom of the list, have a Good Prince and with his ever willingness to accommodate, come spring, summer or fall, the bluegill should be elected to fill that role.

Try several different patterns of wet flies and you are sure to have one that will finally suit the fancy of His Royal Highness and if using a light weight fly rod you hook him on the end of a 3x or 4x leader you'll know you have something. The water won't erupt, the line won't make the guides smoke, the reel won't burn out a bearing nor your wrists tire out but for size and weight he will give you a lot of fun and sport for a few minutes.

If the water is rough on the surface, get down to him with worms and a bobber. He likes a worm on a number eight or ten hook. One or two BB shot will take the bait down to him and this agreeable little cuss will not keep you waiting long to give you, your money's worth.

Late one afternoon, early this summer, after eight very discouraging hours spent on Ridley Creek, trying every fly in the box in an endeavor to entice some trout we stopped at the Bishop's Hollow Bridge to see if the Good Prince would send me home unskunked. A stiff breeze was blowing making the water a little choppy and after trying several different wet flies without even a bump and having no worms along I tied on a tiny spinner I had in the bag. After a couple of casts I could see some bluegills follow the spinner on the retrieve, but not hitting at it. In the bag I also had a small jar with a few strips of very ancient, discolored pork rind, it had turned to a reddish brown. Cutting these strips down to about three-quarters of an inch long and splitting them I attached it to a number ten hook and the spinner. Retrieved it just fast enough to make the spinner work and in a short while I had taken five fish two



View of Springton Reservoir and the Gradyville Road Bridge.

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ICE FISHING APPEALS TO HARDY SPORTSMEN WHO: CAN STAND COLD

By JOE McARTHUR

Heddon Fish-Flashes Editor

CE fishing is one of the most interesting sports. Those who have had a good taste of this method of trying to lure the finny tribe become enamoured and will return for more and more. That same indescribable "something" (found in all real fishermen)—takes hold inside.

People who do their fishing in summertime, when questioned by non-followers of Ike Walton can explain their enthusiasm for the sport by mentioning the beauties of nature and the peaceful, quiet pleasure to be derived from listening to the rippling of the water; the singing of the birds; all forms of life bursting into being before your eyes; even the sighing of the leaves, as the soft summer breeze glides invisibly through the trees.

But, try to explain the urge—the "something inside," which makes the fisherman go ice fishing when in place of all the alluring beauty of nature, we have Nature in her killing mood—a mood which would destroy all living things on the earth, if these things did not take on a protective covering of one form or another. Try to explain the urge of that "something inside" which will make men and women bundle clothing on their bodies as a protective covering against Nature's death-dealing season and go fishing through the ice.

You may try to explain, but nobody will believe. You have nothing to offer but cold feet, cold hands, chattering teeth, watery eyes, your body stiff with cold. Against this, you have the mysterious pull of a fish in the black depth of the water—then you make a nice catch of blue gills, perch, walleyed pike or Great Northern pike.

Two Forms

There are two forms of ice fishing; one is to cut some holes in the ice and use a short rod at each hole, and the other is to use a fish house with a hole or holes cut in the floor and sit over the corresponding holes cut in the ice. However, before trying either method of ice fishing, you should consult the laws of your State concerning this method of fishing.

Let us first take up the method used when fishing without a house. The tool for this sport is a "spud". This tool is made of metal, and is the size and shape of an ax, the only difference being that the handle, which can be made of wood or metal, comes out of the end instead of out of the side. This tool is used for cutting holes in thick ice.

In each hole is used a single hook and line, attached to a short rod three or four feet long. The line can be tied to the tip of the rod, or run through a tiptop and one guide and wrapped around the handle. Many fishermen use a short length of gut between the No. 5 hook and line, with a BB shot



D. Tracy Beers has just brought up through the ice a fine 12 inch perch.

fastened nine inches from the hook; then, depending upon the depth selected, a small

cork just large enough to float the bait and small enough to allow the pan fish to take it under the water.

The favorite bait for pan fish, is still the lowly worm, although some fishermen use ice flies in various patterns with a small lead shot fastened to the bend of the hook. When fishing for perch, fishermen favor the small minnow hooked through the skin in the middle of the back fin. Care must be taken to handle the minnow gently, as a lively minnow is a better lure.

Give Pickerel Line

If more than one line is permitted part of them are set out for pickerel. For pickerel fishing, the outdoor magazines feature many different gadgets-all of them very good. The main object is to permit the fish to take all the line he wants. Here is a good cheap hookup. Use a 1-0 hook to which is fastened about six inches of wire leader and a lead weight of about a quarter of an ounce. Use about twenty yards of good line-about thirty pound test. Wrap this around the middle of a round stick about fourteen inches long and an inch and one-half in diameter. Pay out enough line to take care of the depth at which you are fishing, then cut a stick or twig from brush and fasten this stick in the ice at the edge of a six or eight inch round hole, through which you are planning to fish. Give your line about two turns around this stick, then tie a small piece of red cloth to the line, lay the stick with balance of the line about three feet from the hole.

When the fish strikes, he will pull down (Continued on page 18)



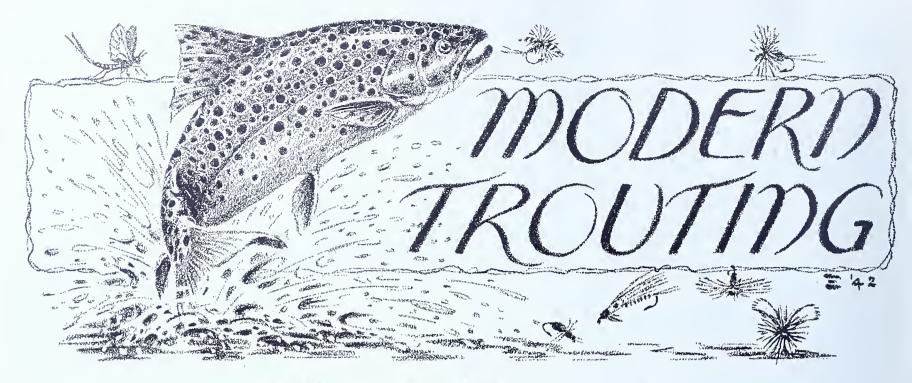
Up around the Presque Isle in Lake Erie they take their ice fishing seriously.



There are but few lake trout in Pennsylvania. They inhabit very deep water. George Armitage of Alderson, Luzerne County caught this fine specimen weighing 10 pounds 10 ounces, in Harvey's Lake July 12, 1913



History repeats. While combing the depths of Harvey's Lake, July 12, 1943 with a trolling spoon George Armitage of Alderson caught another lake trout six ounces lighter than the one taken 30 years ago.



WHAT ABOUT THE BIG ONES?

By CHARLES K. FOX

B IG trout, that is fish that weigh pounds, appear to be a scarce article in our streams, but is this actually the case? We all know that trout will attain large proportions. Each year the catching of a few browns and rainbows weighing more than 4½ pounds is reported to the Fish Commission.

Let's consider where such fish are located, how many there might be and how they might be caught.

The fisherman cannot possibly catch all the trout from a pond or stream. Some will be hooked but will get away; others will never be touched by fishermen. Some are located in big rough tough water, some in inaccessible places and still others in the deep quiet waters of dams. Inaccessible waters naturally maintain many holdover trout, but the fish also migrate to and from such spots.

We must conclude that a certain number of fish are bound to evade anglers and predators and this even happens to a lesser degree in accessible hard fished spots. A good example of the latter is the 13½ lb. brown trout caught from Jordan Creek near Allentown by Jack Houser.

Consider the whole situation on a percentage basis. Suppose just $\frac{1}{10}$ of $\frac{1}{0}$ of all the trout, both stocked and native fish, succeed in surviving five seasons. This estimate of 1 out of a 1000, we believe, is on the conservative side. If such a figure is at all accurate there should be a considerable number of big fellows as well as a constant supply coming along.

The majority of big ones are undoubtedly located in big waters, particularly in the lower reaches of big streams, however the depths of ponds or dams also hold their share

A tremendous trout, the weight of which was reputed to be around 10 lbs., was found dead in the Axe Factor Dam of Fishing Creek near Lamar some years ago.

Another giant brown of similar proportions was trapped alive in the outlet of the

dam at the head of Big Springs near Newville, about seven years ago. Warden George James caught this fish and removed it from its habitat, a brook trout pond, and released it in the Letort at Carlisle. George tells us that the jaws were torn and cut by fish hooks. After it was transferred to the Letort it took up an abode under a bridge. On different occasions it was again hooked, but never caught.

When the lake at Boiling Springs was drained for construction purposes a tremendous trout was temporarily stranded in a small pocket. The fish remained unharmed and the pond was again filled. We never heard tell of the landing of this old patriarch.

Roy Brunner of Allentown, has just told us of a deep undermined spot in the Little Lehigh near the Trexler hatchery, where there are always some huge trout. On one occasion a friend of his got into this place after a rain when the stream was still raising. This man is a skilled minnow fisherman. He successfully hooked, played and landed a brown trout in the ten pound category. As he waded to shore with the great trout weakly struggling, the mesh of the net broke and the fish landed back in the stream; the rod broke; the leader then severed, and finally the trout disappeared.

One time we saw a great trout in the pool below a dam in the Yellow Breeches. It looked larger than anything we ever saw in a hatchery pond or from the sidewalk of Bellefonte. We feel very sure that this fish was never caught.

And so it goes. We know that there are some thundering big trout. There may be many more of which no fisherman has knowledge.

Most of the big trout are in all probability located in the deepest available water. Some more are undoubtedly located in the spring holes of large streams in sections not generally considered trout water.

A fisherman might locate the cold spots in the lower reaches by wet wading in warm weather or by the persistent use of a thermometer. Bear in mind that brown trout like overhead cover such as a bank, a rock, or a log.

A young trout feeds on insects. As it grows it turns on minnows and other fish. Fish form its major diet after it attains a length of about 16 inches. The mouth and jaws grow large and the teeth undergo marked development. Its physical construction points to fish and other forms of sizeable life for food. Smaller trout as well as any other fish are grist for its mill. Insects will no longer satisfy; it requires too much time to secure enough.

But a big trout is faced with a great problem. How can it catch all the small fish it desires and requires? Its size is an actual handicap. It is hard for it to get within striking distance of its prey without being discovered. Once it is seen at a respectable distance by a smaller fish, the smaller fish immediately flees for its life. What chance has a large trout of capturing a small fish in shallow water? The pursuer does not pick off an easy meal at will.

But a trout is smart and he learns quickly. There is only one practical alternative for the trout which is beginning to feed heavily on other fish life. He must forage at night to successfully catch his prey and appease his growing appetite. The larger he becomes the more substance he requires. But this does not mean he must feed every night. One real meal may satisfy him for almost one week.

All day long he hides in a dark sheltered spot. At night he comes forth. As time goes by he exposes himself less and less to daylight. There is every reason to believe that his night eyes improve with use. Like an owl he abhors the bright rays of the sun. Feeding time by necessity has become night time.

There are many fishermen who do not care to fish at this time. They are not satisfied with the uncertainties and inconveniences of night fishing when far fewer (Continued on page 19)



It required two hours for M. Haffely to land his great muskie from Edinboro Lake. The 35 pounder was 51½ inches in length and was caught on a sucker.

FLY ROD FOR MINK

By DOC HOWE

S OME years ago I scratched fiddle afternoons and evenings at Carthage, N. Y. Mornings usually found me relaxing with a fishing rod ten miles away on Pleasant Lake.

This small lake had furnished many a "thump" all out of proportion to its size. It teemed with perch, crawfish and other nourishing fish-food and the inhabiting bass, northern pike and bullheads just didn't realize their strength. It seemed as if a new experience always awaited me.

Once, a three-pound bullhead struck a plug I was casting. I ate him and a bullhead never tasted better. Maybe a little imagination was "gummed" along with fish!

On another occasion while playing a 20-inch northern pike, a shadow half as long as an oar tried to rob me of my ready-to-land fish. There was no hopes of hooking the monster so a frantic tug-of-war took place for possession of the 20-inch pike. The water was clear and I could see that my adversary was a pike well over fifteen pounds. He nailed the twenty-incher sideways, took it down several feet, and then in plain sight tried to hunch it around lengthwise to swallow. Some nerve!

It was during the hunching process that I could jerk the dinner away from the big guy, but even as I hauled furiously on the line he would slide up and grab it again. I have no idea how long it took before I

finally plopped my fish into the boat. What a sight he was. There had been nothing wrong with "Grandpop's" dental work. When I saw the width of those bites—well—I just got outta there. Anything might happen in that lake!

I'll never forget the mink. On this particular morning I was after bass and had a fly rod with three dozen lively crawfish for enticers. The boat was anchored in the angle formed by a sharply dropping shoreline and an old fallen maple tree. There was a profusion of limbs and branches both in and out of the water, a tempting spot.

The boat wiggling in the faint breeze and a warm friendly sun, soothed me into an acute attack of passivity. In order that this chould not be interrupted without cause, I stuck a split-cork on the line about six feet above the bait and deposited the works as close to the tree as I dared.

Before long my hazy attention focused on a full-grown mink, easing along shore and then slipping dreamlike into the water. Soon he would reappear withsomething in his mouth and silently melt into the rocky shore. I wondered if there might be a family hidden nearby, and just what he or she was catching. What do mink eat anyway? Small fish? Crawfish?

While I mused the mink came out the tree trunk, hesitated, then made for a stub directly above the cork. I perked up.

"Do you suppose he's after my energetic crawfish?" Even as the thought flashed through my mind he dove quietly towards my bait. Almost at once the cork blurped out of sight and with eyes popping, I struck. What a surge—action—nothing else but! This was different. I could actually feel four feet propelling the cork way down deep.

"An athlete eh—maybe I've got more than I can chew—this IS something! If he ever gets his toes in the tree it will be so-long, he'll bust the outfit." The rod creaked and the line sung protestingly—what a battle!

"Betcha if I get this 'bird' I'll be the first person who ever landed a mink on a fly rod. Some fun! Nobody would believe me." Seconds passed, maybe hours. As the prize wheeled this way and that I could glimpse the cork occasionally. It seemed as if he was weakening.

"It won't be long now . . . But say! . . . Here's something else! The season is closed on mink. I won't be able to get the hook out as long as the mink is alive . . . he'd sure spoil the waterproofing of my hands right now. Although the game warden is a personal friend, he wouldn't stand for this from his own Grandmother—he'll pinch me sure. Oh me! What'll I do? Cut the line? That's cruel too . . . Please Mr. Mink, get

(Continued on page 18)

STREAMER FLY EXPERIMENT

By CHARLES H. AMANN

In an early issue, if space permits, we intend to illustrate a few simple fly tying tricks, but before we get wound up in the technique of fly tying, we feel that now is the time to clear up a controversy that has raged for years amongst fly fishermen.

Bucktail streamer flies have always been killers for trout and bass, and the question as to the most effective type of bucktail fly, that is the glass eye, jungle cock, painted eye or plain eye type, has been clarified to a certain extent, by a noted fisherman. This enterprising fellow undertook an experiment which covered four states and extended over three complete seasons, or 139 fishing days, 87 days were used for the trout tests, and 52 days for the bass tests. The 24 flies used were tied in 6 simple patterns on No. 8 sprout hooks, with silver tinsel bodies, 4 of each pattern had the following head dressing: plain (no eyes), jungle cock eyes, painted eyes, small glass eyes. The following chart shows the results of the 139 day experiment.

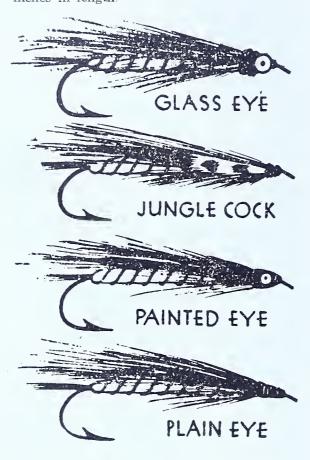
87	Trout	Fishing	Daus

or front fr	Sitting	Days								
	Glass		- Plainte							
Fly Patterns	Eyes		Eyes	Eyes						
Red and White	144	22	39	20						
Brown	94	12	21	14						
Brown and White	102	18	30	27						
Yellow and White	74	11	17	9						
All White	. 16	9	12	2						
Black and White	90	13	26	10						
Total Trout Caught	520	85	145	82						
52 Bass Fishing Days										
Red and White	74	13	20	20						
Brown	88	11	20	20						
Brown and White	82	10	16	31						
Yellow and White	36	4	6	10						
All White	40	7	12	6						
Black and White	98	23	19	7						
Total Bass Caught	418	68	93	94						
Total Both Species	938	153	238	176						
-Federated Ri	hode 1	sland	Sports	sman.						

Wifey (apologetically): "I took the recipe for this cake out of the cook book.'

Husband (tactfully): "You did quite right, darling. It should never have been put in.'

Last June Mace Freeman of Canton, made an execellent catch of trout from the Hoagland Branch, a tributary to Elk Creek in Sullivan County. The trout were lured with dry flies and the largest fish was 201/4 inches in length.



FISHERMAN CATCHES EVERY-THING BUT FISH

Shreveport, La., (A.P.)—Bill Bottom, fisherman, says he's considering hocking his pole and tackle and entering the salvage business.

Recently he met a woman who dropped her purse down a sewer grating. With his fishline, he retrieved it, blushed at her thanks and went on.

From a boat in Cross Lake his hook caught on something. He brought up the aileron of a B-26 bomber which had crashed in the lake in January. There was some mighty quick action when he boated his find and a 22-inch water snake crawled out.

But Bottom caught no fish.

BUY BONDS



GEORGE PHILLIPS-Alexandria, Pa.

I have finally gotten around to sending you the list of my favorite flies, and here they are:

Deer Hair Fly--

Tied with clipped deer hair body nat. color—Tail nat. deer hair Wings same as tail and hackle mixed grizzly and brown as on Adams. I like this fly in size 12 and it is practically all that I use on free stone mountain streams.

Light Cahill-

Body cream fox fur; Tail ginger as well as hackle (both should be light ginger) and wings of speckled wood duck flank. (Grey mallard is often used for wings.) Size 12 and 14 with some 16s and 18s for use on Spring Creek and other lime stone streams.

Quill Gordon-

Body translucent bluish quill; Tail dark blue dun; hackle same as tail; wing speckled feather from flank of wood duck. Size 10, 12 and 14.

Pale Watery Dun (Special Wing)—

Body pale yellow spun fur; hackle pale yellow or cream; tail as hackle; wing speckled wood duck. 14-16-18.

Pale Eve. Dun (Special Wing)-

Body cream fur from belly of red fox; wing grey mallard or teal; hackle light blue dun; tail as hackle. 14-16-18.

Black Midge-

Body very dark translucent quill; hackle black; tail as hackle; wings very small blue dun hackle tips. 16-18-20.

Body blue dun spun fur; hackle brown; tail as hackle; wings of speckled wood duck. Size 10-12-14.

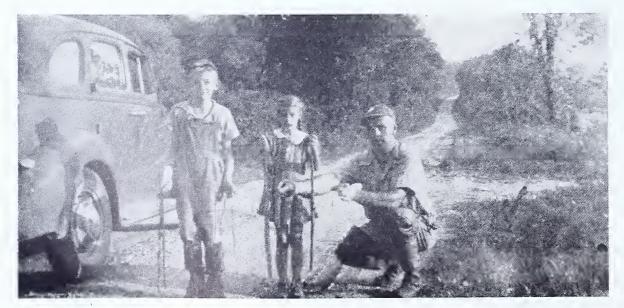
Multicolor Variant-

Body silver or gold; wings blue dun hackle points; hackle large multicolor or mixed redblack and grizzly. Size 12. Badger Spider Palmer—

'Hackle honey badger (large) tied Palmer; tail as hackle. No wings. Size 12.

I rarely use wet flies as I use a nymph in its place.

Rainbow trout are travelers. One, tagged in Iosco County, Mich., April 15, 1941, was netted two years later in Lake Erie near Kingsville, Canada, some 300 miles from the tagging point. Another tagged trout covered a distance of approximately 430 miles.





We nominate Julius DuBois of Midway as the champion vermin killer of all Pennsylvania, but his main sp

THE NEW ENGLAND TROUT SITUATION

By SIBLEY SMITH

One might say that there were three grades of trout fishing. The tops, you get in a stream where the trout reproduce naturally in addition to stocking, where the fish hold over from season to season and maintain a good rate of growth. This, I don't have to tell you, is an unfortunately rare condition east of the Mississippi and south of the North Woods. The second grade occurs where, although the fish do not reproduce naturally, they do hold over well and grow to decent size. The lowest grade is called "put and take fishing"; practically all fish caught have been stocked during the current season. You know, before you start fishing that the size of the trout you catch is limited to the size of the fish put in. This eliminates one of the greatest attractions of trout fishing or of any other kind of fishing. The lure of the "old lunker." We might as well face it—"put and take fishing" is what we have in Rhode Island.

Now, Lord knows, "put and take" is better than nothing and I'm certainly grateful for the way Mr. Gibbs has improved the fishing in the State—BUT—do we have to stop there? Has it been proven, beyond reasonable doubt, that our streams are not suitable (or that they can't be made suitable) for the normal growth and maintenance of trout? I don't think it has by any means. There are a lot of questions yet to be answered. Here are a few of them:

Why is it that native unstocked brook trout spawn and reproduce in our smaller unstocked streams? Why won't the hatchery trout do it? Then again—the hatchery trout reproduces in the hatchery, why not in the streams? Is it temperature, or predators, or feed, or bottom conditions? What is it? This Quaboag River Experiment was a step in the right direction. But it was in Massachusetts, not in Rhode Island, and it was on the hypothesis that put and take fishing is an unfortunate necessity in southern New England.

Well, what are we going to do about it? How about a higher license fee? Use that money to hire a top-notch research staff and put the problem right up to them. Let them close off any stream they wish for one, two, or five years and use it as a laboratory, and

before we resign ourselves to putting 'em in one day and taking 'em out the next, let's get the facts!—Federated Rhode Island Sportsman.



Perry Cox caught a 12½ pound 39 inch muskie at Ashton's Corners on the West Branch of French Creek. This area produced upwards to 60 muskies during the past season.

SHIP LIVE CARP 2,000 MILES

New York, Dec. 16.—(U.P.)—Carp from fresh water ports in 12 states are being shipped alive to meat-rationed diners as far as 2,000 miles away. A flow of water at a constant temperature of 45 degrees keeps the wriggling fish alive in tank cars. The Railway Express Agency, which handles the shipments, estimates that more than 5,000,000 pounds of carp will reach markets far from the source of supply this year.

TYING TRICKS

BOR FREDERICK

Just a few handy tying tricks which, I hope, will improve your fly tying skill.

Never marry feather fibers from different types of birds if at all possible. Different types of birds usually have unlike webbing and the marrying joint will be weak.

Many useful materials can be secured, for the asking or a little bartering, from your hunting friends. Grey and red squirrel tails, pheasant, duck, and woodcock wings, and bucktails, to mention only a few. During the cold months of January and February many top quality hackles may be secured from your local poultry markets merely for the asking.

Peacock eyes with light quills are in a sense rare, yet are much in demand. Dark quills can be bleached by soaking them in peroxide over night. The light side will be bleached but the peroxide will have no effect on the dark side.

The tiny metallic hairs on peacock eye quills can be stripped from the fibers more easily if the quills are first soaked in hot water for a few minutes.

The nearest to perfect method of tying on upright dry fly wings is to tie them on reversed. This method is easy, the wing butts are tied over with the body making them absolutely secure, they make a perfect tapered body, and the tendency of the wings to tilt forward makes a perfectly balanced fly.

One of the beginners most disastrous mistakes is to dress his flies too fully. This is also the disadvantage of most commercially tied flies. All flies, especially wets, will be better producers if dressed lightly.

TIPS FOR ANGLERS

A good way to fish in lily beds is to cast the lure or bait on a lily pad, let it lie there motionless for a few seconds, and then gently twitch it off into the water. Be ready for a strike the moment the lure hits the surface. Veterans say the bass can see the lure through the lily pad and will lie in wait for it to tumble off.—Connellsville Courier.

Due to conditions beyond the control of the Fish Commission it has been impossible to maintain a regular publication schedule of the Pennsylvania Angler.

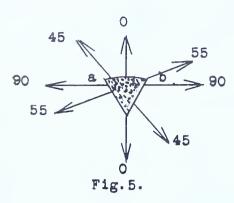




muskies and carp. In the next issue of the Angler we will publish his interesting vermin contest records.

MULTIPLE STRIP ROD

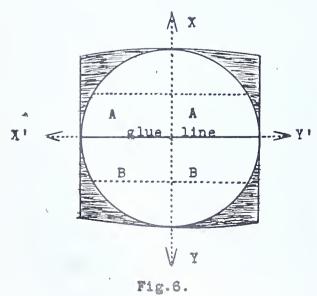
(Continued from page 5)



To make practical application of these principles we must find some method of evaluation by which to define the power and limits of flexational resistance in simple mathematical terms. The formula is obvious.

If the line of least resistance is through the plane x-y (fig. 2), which is perpendicular to the enamel face, and the line of greatest resistance is through the plane x'-y', which is parallel to the enamel face, we may, if we please, assign an arbitrary power value of 0 (zero) units to the power generated by the strip when the plane of flexation passes through x-y and a value of 90 units to the power generated when the plane passes through x'-y'. These are the two extremes. All intermediate power values will then coincide in terms of degrees of arc with the angular inclination of the enamel face of the strip to any given plane of flexation. For example, fig. 5 represents one of the strips of a conventional six strip rod in which the side (really an arc) ab is the enamel face. When the plane of flexation passes through 00, which is perpendicular to the enamel face, the power unit value will be zero. When it passes through the plane parallel to the enamel face (chord of the arc) the value will be 90 units. Likewise, there will be 45 and 55 units respectively for the other two planes shown.

In this method of evaluation no power value whatever is assigned to the alternate compression and elongation of the fiber when the plane of flexation is perpendicular to the enamel face; as, for example, in the 6 strip rod shown in fig. 10 where the plane passes through x—y. That this is a factor entering into the elastic properties of the rod no one will deny; but the attempt to assign a definite power value to this factor



would result in a mathematical complication which would defeat the entire purpose of this thesis. And in any case, the introduction of this factor would not alter the *relative* values as among the several types of construction which we purpose to examine.

In applying this method we will consider the rod as an integral unit with a maximum potential of power generation of 90 units for the sum of all its strips. Thus, if the rod has 6 strips the maximum potential value for each would be 15 units. If the rod has 4 strips the value of each would be 22.5 units and so on.

Figures 6 to 11 are transverse sections of rods having 2-3-4-5-6 and 8 strips each. In each case there are 2 planes of flexation shown, indicating the maximum angular variation possible for each. It will be observed that the angular variation in every instance is invariably equal to ½ the interior angle of the strip. As the ever-changing plane of flexation moves from x—y toward x'—y' as an angular limit and passes through x'—y' toward the next adjacent strip, the variation decreases until the next complementary plane is reached; that is to say, the original status. Also, in each figure, we

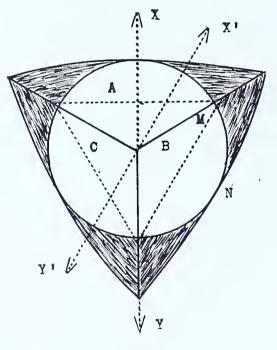
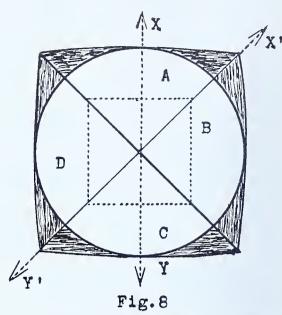


Fig. 7

have shown in broken lines an inscribed polygon with sides parallel to the enamel faces to indicate a uniform area of hard fiber densities equal to ½ the depth of the strips; the importance of which will be made apparent later on.

Let us select the 3 strip rod as an example by which to apply the method of power evaluation. We find that each strip has a possible fractional value of 30 units (9% = 30) but the total of their effective values will depend on the varying sums of their angular inclination with reference to a constantly changing plane of flexation. Thus, when the plane of flexation passes through x-v the 3 strips A, B and C have actual values of 0, 20 and 20 units respectively; since the enamel face of strip A is perpendicular to the plane of flexation and hence has no power value whatever. Strips B and C have each a 30° inclination and therefore exert only %rds of their full potential, or 20 units each. But when the plane of flexation shifts to its maximum possible angular variation at x'-y' the



values, by similar computation, change to 10, 30 and 10 units respectively; an increase in efficiency of 25%.

A complete analysis of the 6 different types (figs. 6 to 11) is found in the chart, fig. 12, and an examination of the chart leads to some interesting conclusions.

The 2 strip rod (fig. 6) is dismissed immediately because of the 100% variation of power generation as between the 2 planes of flexation. If the guides were mounted on one or the other of the 2 enamel faces the plane of flexation would be constant in the plane x-y. Since this is the line of least resistance for both strips the composite power generation would be zero and the rod would be worthless as a casting instrument, by our method. If the guides were mounted on either of the 2 edge-faces, bringing the plane of flexation through x'-y' (which is the glue-line), the rod would turn over in a 90° torque as the test strip did in the vise (fig. 4). The tip would describe an orbit somewhat similar to that of a pin wheel.

The 3 strip rod introduces quite another problem. It must be remembered that the degree of arc of the enamel face of each

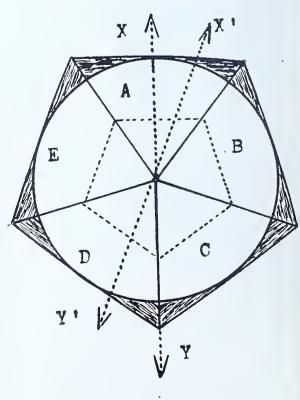


Fig.9.

individual strip is determined by the diameter of the culm from which it is taken. Culms vary from 1" to $2\frac{1}{2}$ " in diameter (often larger for salt water rods) but most makers use butt-cut culms exclusively, which average about 2" in diameter. The average degree of arc, therefore, of the enamel face of the actual strip would be on a radius of 1". If the finished section has an average diameter, say, of $\frac{1}{4}$ " and is enlarged 8 diameters in our figures 6 to 11 we must maintain this ratio in showing the true enamel-face contours of the original strips. The required radius would be 8".

The required radius would be 8".

The shaded areas in the cross sections show the difference in area of the original strips immediately after gluing-up as compared with the area when and if the corners of the strips were to be cut away to produce a circular section equal in area to the inscribed circle. If the section is reduced to circular form (an unthinkable practice in our opinion; but one often resorted to by at least one of the well known English makers) there will be a marked difference in both fiber depth and density at points M and N (fig. 7) and a consequent loss of both power and uniform resiliency.

The significance of the inscribed, brokenline, triangular section now becomes evident; for the hardest density of fiber will have completely "run out" at point M (and at correlative points on the other 2 glue lines). Compare the 3 strip with the 8, for example, and the importance of this factor will be clearly emphasized. We find, then, that the fewer the strips the less uniformly symmetrical the balance of fiber densities and that, furthermore, the closer the finished section approximates the inscribed circle by cutting away the corners of the strips the greater the reduction of hard fiber; which, in turn, reduces the effective driving force of the rod.

If the 3 strip rod is left unaltered in its original form the overwhelming disparity of power generation in strip B, which will develop its full potential of 30 units when the plane of flexation passes through x'—y' as compared to only 20 units for the sum of A and C, will tend to force the rod tip out of an uniform plane of flexation in obedience

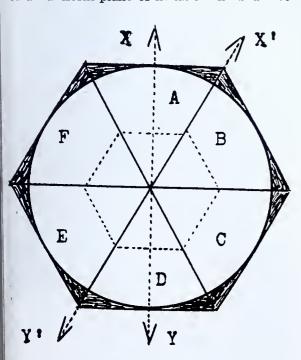


Fig. 10.

to the physical law previously cited. The upper sector of the rod will "corkscrew" in an arc of 120° (not 90°) in an effort to relieve itself of the intolerable stress. Accurate casting will be an impossibility. The 3 strip is unacceptable.

This reminds us of an incident related by one of the older rod makers a few years ago. He said he had an order for a 3 strip rod which he had to refuse because his cutters were not adaptable to the required 120° strips. The customer offered to have the cutters made if the maker would then finish the rod. This was agreed to and the rod was so constructed. We asked him how it turned out and he replied, "Just what you would expect. The tip waved like a cattail. It was a dandy rod for casting around corners."

In the 4 strip (fig. 8) we find the first example of a theoretically perfect balance in power generation no matter where the plane of flexation may occur. But the same objection we have called attention to in the case of the 3 strip applies to the 4; although to a lesser degree. There is, also, another point of weakness which might well have been cited in the case of the 3 strip. We have reference to the difficulty of securely and effectively gluing-up rods having strips with interior angles of 90° or more. To illustrate, consider the difficulty of driving an axe having a wide-angled head into a block of wood as compared to the ease with which a thin-bladed axe will function. When the glue is applied to the strips and the assembled section is put into the gluing machine the constrictive force of both the belt and the glue cords tends to wedge the strips tightly together. The wedging force decreases directly with the widening of the interior angles of the individual strips. In the 3 strip it is entirely non-existent. In the 4 strip it is of dubious value; and, of course, it increases with the number of strips.

The 5 strip (fig. 9) is of particular interest because it is the type of construction advocated by Mr. Crompton. The power generation analysis will serve as a further illustration of our method. The maximum power-unit value per strip is 18 (9% = 18). When the plane of flexation passes through x—y the enamel face of strip A is perpendicular to the line x-y therefore its power value is zero. Strips B and E are each inclined 18° from the line x-y therefore each has a value of 14.4 units ($^{18}\%_{0} = \frac{1}{5}$ loss of efficiency or 20% of 18 units = 3.6 units. 18 - 3.6 = 14.4 units). By similar computation strips C and D each have a value of 7.2 units since they are inclined 54° from the line x-y and hence are only 40% efficient. When the plane of flexation passes to x'-y' the values change likewise, as shown in the chart, (fig. 12).

Mr. Crompton has been making 5 strip rods for many years and in a descriptive story in the Sports Afield Fishing Annual for 1938 he stated the reasons for his preference. We summarize his statements. (1) The odd number of strips keeps the glue line "off center" at all times, thereby shifting most of the flexing burden from the glue to the fiber and reducing the shearing stresses on the adhesion faces. (2) A 20% reduction of risk from open glue joints by reason of 5 glue lines instead of the convential 6. (3) Allows better spiral stag-

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gering and greater distance between nodes.
(4) Greater strength and more power for same weight and length of wood.

In a personal letter (Dec. 24, 1937) Mr. Crompton supplemented the above with these remarks. "5 strip construction is standard with me. I made the first one about 25 years ago. On paper a 5 strip can be proven all wrong. (Query-is our analysis that wide of the mark?) I have seen it done many times, but . . . there are factors the paper figures never include. As a rod in the 'flesh' and on the graph board, you'd be surprised. 5 strip has the graph board's approval and the board is brutally frank and plays no favorites. Sports Afield will soon print the original 5 strip story. I am brushing up on my footwork to be in better condition to dodge when that story breaks. My condemnation is on the way." We can find no grounds for Mr. Crompton's apprehensions.

From a later letter (Jan. 14, 1940) we quote the following. "I freely admit that, on paper, the 5 strip may be the crime they (the engineers) say it is. I further admit that the ideal rod construction (cross section only) is round and furthermore, that the farther any rod strays from round, the poorer the rod. If all this be true (and I am not contending that it is not) then, on paper, the 12 strip is better than a 10; a 10 better than an 8; and 8 better than a 6 and the 5 strip is a state's prison offense. But all this time there is no glue—on paper. But there is glue in most rods; altogether too much glue, in fact. Many 6 strip rods have as much as 12 degrees. At this same rate a 12 strip rod would have 24 degrees. It's getting funny. Why not make an 'all glue' rod?"

Now consider this quotation from a letter from Mr. Lew Stoner. "As to the 5 spline (strip) grain distribution, a favorable claim for this type of construction is that a given weight of material will have more and more surfaces (cross section perimeter) as you decrease the number of sides of the polygon. For this reason the triangle would be the theoretically perfect rod section. Calculation of internal stresses in this shape, how-

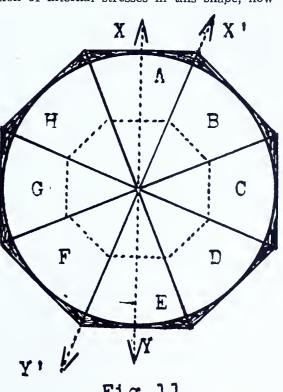


Fig. 11.

Number of	Planes of	Power-unit	Strips							Wetel.	Voni	Of of Mari	
	Flexation	values per _ Strip	A	В	С	D	E	F	G	Н	Total Units	Vari- ations	% of Vari- ation
2 X—Y X'—Y'	X —Y	45 —	0	0							0	- 90	100
	X'Y'		45	45							90		
3 X—Y X'—Y'	30	0	20	20						40	- 10	25	
		10	30	10						50			
X —Y	X —Y	00.5	0	22.5	0	22.5					45	- 0	0
4	4 X'-Y' 22	22.5 -	11.25	11.25	11.25	11.25					45		
5 X —Y X'—Y'	X —Y	40	0	14.4	7.2	7.2	14.4				43.2	0.0	0.00
	X'—Y' 18 —	3.6	10.8	10.8	3.6	18				46.8	— 3.6	8.33	
C	X —Y	X—Y X'—Y' 15 <u>0</u> 5	0	10	10	0	10	10			40	10	0.5
	X'— Y'		5	15	5	5	15			50	- 10	25	
0	X —Y	11 25	0	5.625	11.25	5.625	0	5.625	11.25	5.625	45	0	0
	X'— Y'		2.81	2.81	8.44	8.44	2.81	2.81	8.44	8.44	45	- 0	

ANALYSIS OF MULTIPLE STRIP POWER GENERATION Fig. 12

ever, nullifies the advantages to be had by its adoption."

The 5 strip type exhibits a much lower percentage of fluctuation of power generation, as between the 2 planes of flexation, than the conventional 6 strip type does. The comparative percentages are 8.33 and 25. If our method of power analysis has any merit whatsoever this disparity cannot be dismissed lightly. As only one point of speculation, let us assume that a standard HDH line is suitable for the 6 strip when the plane of flexation is through x—y. What line, then, will it require when the power generation is "stepped-up" 25% to 50 units when the plane passes to x'—y'?

The only disquieting thought in connection with the 5 strip is the fact that strip E in the x'—y' plane of flexation generates its full potential of 18 units and is the only strip in either plane of flexation that does so. Perhaps this is compensated for by strips B and C which are on the opposite side of the median line and have a total of 21.6 units.

The convential 6 strip (fig. 10) is a member of the 3 strip series since it shows identical ratings by our power evaluation method; both as to amount of power generated and percentage of variation. But there the similarity ends. There is a symmetry of fiber distribution and a balance of power generation on both sides of the median line which is entirely lacking in the 3 strip. The corners of the glued-up "hex" may be slightly rounded without serious disturbance of the balance in fiber densities (as they are in actual practice). The interior angles of the strips are such that the wedging effect in the gluing-up process results in tight glue bonds. The fine tip strips are not so threadlike as to be virtually unworkable, as is the case with 8 strip tips.

6 strip construction is admittedly a compromise; since it embodies as many desirable elements and, at the same time, avoids or minimizes as many undesirable weaknesses as present-day knowledge and practice make possible. Its warmest advocates will cheerfully concede that it is far from ideal; but it has stood the test of critical usage for more than 70 years and shows no immediate indications of relinquishing its almost-universal leadership. How long that preeminence will prevail and what direction the

next trend of development will follow is beyond the scope of this study.

Our last example, the 8 strip (fig. 11), brings us to the end of our analysis. Here we find the first theoretically perfect type; or, to be more nearly accurate, we might say that here we find that the theoretical or structural defects of the preceding types are either absent or reduced to a negligible minimum. The 8 strip rod was rather common a generation or more ago but very few are being offered commercially at the present time. Why? Because production costs are more than 25% higher than for the 6 strip and this factor imposes a competitive handicap it cannot successfully overcome. The 6 strip dominates the present-day market not because it is superior to the 8 strip but because the difference in effective utility is not sufficient to warrant the extra cost of production. And for the same reason it is not without the range of possibility that Mr. Crompton's 5 strip will eventually displace the 6. Who shall say?

Continue this method of power evaluation and analysis by dividing the circle into as many segments as you like. You will find that the series based on the triangle and its multiples (except those evenly divisible by 4), 3-6-9-15-18-21, etc., exhibits a progressively diminishing variation of power generation as the number of strips increases. In the series based on the quadrant (not including the 2 strip, of course) and its multiples, all equally divisible by 4, the power generation is uniform, constant and without variation whether the number of strips be 4 or 48 and no matter where the plane of flexation may be found. Rods having strips in agreement with the prime number series (5-7-11, etc.) are subject to individual analyses.

Absolute perfection is found only in the arrangement and distribution of fiber in the natural culm; as a simple geometrical demonstration will prove. Divide a circle into 4 equal parts and designate one of the extended diameters as the plane of flexation. The sum of the power units at the 4 diametric division points will be exactly 45 by our method of evaluation. Now revolve the quadrant in either direction as many degrees as you like. The answer will be always the same, 45 units, no more, no less—and absolutely no variation whatsoever. Thus doth

Mother Nature set forth a simple lesson for her children.

Many are the ingenious expedients by which to increase the natural, inherent power of the fiber structure and widen the range of utility. There are doube-built and triplebuilt rods in which the strips are made up of 2 or 3 horizontal laminations. There are combinations of horizontal and vertical laminations in many different designs. There are rods with combinations of bamboo fiber and tough native woods; as well as hard, fibrous, synthetic materials. There are rods with thin outer shells of bamboo and solid cores of lighter woods. There are hollow and semi-hollow sections with and without internal supporting members. There are rods with steel wire centers and others with small wires inserted in channels in the outer enamel faces of the strips; and still others with fine wire or narrow ribbons of metal wound spirally from ferrule to ferrule. All bear witness to a common quest, the never-ending search for improvement without which we would still be using the streamside hazel and alder "poles" of childhood's happy memories. Let us encourage this quest with generous approval.

The State That Has Everything

"We mine no gold here in Pennsylvania—anyhow not in any considerable quantities—but we draw black gold from the earth more useful far to mankind. And, like all of the rest of America, Pennsylvania has to import its coffee.

"Outside of that, and maybe sugar and citrus fruits indigenous to a very few states and tin and rubber such as the Japs control, we repeat that Pennsylvania has just about everything worth having.

"We are inspired to say so by an excellent advertisement by the State Department of Commerce going the rounds of out-of-the-state publications calling attention to the virtues of Pennsylvania. If America is the 'Arsenal of Democracy' then Pennsylvania is truly the Keystone of the Arsenal.

"It is likewise, as the ad states, the 'Birth State of the Nation,' and of interest to vacationers not only because of its historic lore but on account of its scenic attractions."

-Norristown Times Herald.

FLY FISHING FOR BLACK BASS

(Continued from page 3)

hackles wrapped near the eye of the hook.

I like lots of color in this fly—and so do the bass.

The body, for example, can be made of half white and half yellow deer hair, with light badger hackle. Another good pattern has a body half brown and half gray, with barred rock hackle. A third is entirely black, from tail to hackles. Still another has a gray body and a white tail and hackle. Brown and gray is a good combination. And the brighter the hackles the more effective this fly seems to be. Red, yellow, white, green, and brown—sometimes several colors mixed—are all good.

The fly floats high and dry, and if the hackle is thick and properly tied, no grease

or other dressing need be applied.

The magic hour of dusk is the best time to use this lure. It is then that the black bass, and sunfish and rock bass as well, do their most vigorous surface feeding. The method is simple. Stand quietly in a pool and wait for a feeding fish to dimple the surface within casting distance. Then drop the hair fly as close to this spot as possible, allow it to lie motionless for about ten seconds, then give it a very slight twitch, just enough to disturb the water slightly.

Half a dozen times I have watched the

reaction of fish to this strategy.

When the fly alights on the surface, the fish swims close to it and apparently gives it a careful examination. When suddenly the fly is moved slightly (with practice you can learn to make it just tremble) the fish immediately takes the lure with a determined, sucking strike.

Nine times out of ten the fish is only liphooked, so it puts up a spirited battle. Occasionally, however, you will net a fish that has taken the fly so deeply that it is completely hidden in its mouth, with the hook buried deep down in its throat. Use of a level leader—say of six-pound nylon—about seven feet long is ideal with this particular fly.

It is entirely possible with this lure, properly fished, to catch every rising fish within reach of the angler.

If you think that's a tall statement, let me tell you about an experience one evening last summer. The spot was a pool at the bend of a creek, and I waded out from shore into the very middle of the pool and took my position in a bed of weeds whose tops just reached the surface of the water. I had rigged my tackle before leaving shore, and I smoked a cigarette half through while waiting for the water to quiet down. It was a drought period, incidentally, and the water anywhere around me was not more than two feet in depth. But the bottom of the creek was covered with large rocks, and I knew that some nice black bass and panfish made this particular part of the pool their home.

Opposite me, toward the far shore, the creek made a sort of small bay, and here just before dusk the fish began rising.

In an hour, or perhaps even a little less, I had caught 30 fish out of this bay. As quickly as I could unhook one, dry the fly with a couple of false casts, then drop it back on the surface and give it a slight twitch another fish would take it

I never used that particular fly again. It



was a wreck. The body was flattened to half its original thickness; the tail was torn to shreds, and the hackle was bent and twisted out of shape.

Right here it should be emphasized that fly fishing for bass is not confined to the period of dusk or after nightfall. Some nice bass have been taken on dry flies like the Brown Bivisible in broad daylight and in shallow water. And Al Morehart, of Williamsport, has achieved fine results in fly angling for bass with his own style of dry fly.

Al makes the fly on a size 8 or 10 hook. The body is black wool, with a silver ribbing. The hackle also is black, and the wing is made of gray mallard whisps, as is the tail. This lure requires careful handling, because the silver ribbing makes it rather heavy.

Al's favorite method is to locate a pool of medium depth where there is a bit of slow current, then fish the fly exactly as he would use a dry fly for trout angling in a large pool. During a single summer he caught more than 300 bass of legal size on this type of fly—and he did it in heavily fished streams in Central Pennsylvania.

The possibility that bass can be taken on almost any large size of standard trout flies is suggested by the experience of another friend in taking some dandy smallmouths on a Royal Coachman tied on a size 8 hook.

For the fellow who desires something extra-special in fly fishing for bass the field of nymphs offers possibilities, although my own experience with such lures is strictly limited. There are anglers, however, who have made some nice catches of bass on nymphs.

The bass bug constructed of deer hair or cork is widely known as a bass lure and can be passed over lightly in this article, but it surely is a form of fly, and anybody who has ever used one can attest the vicious delight with which black bass greet this type of lure.

All the popular patterns of streamer flies and bucktails which are used in trout fishing are good lures for bass, and the method of using them is much the same.

The large wet fly used with a spinner

completes the list. This lure may take one of two forms: The conventional bass fly, with a thick body, skimpy hackle, and large quill wings; or a streamer type. My own preference is the latter.

One excellent spinner pattern is built on a hook with a shank of medium length, with a stub of tail (usually red) and a body of silver tinsel wrapped directly on the hook shank. Near the eye four narrow saddle hackles—two red and two white—are bunched together, so that their tips extend out slightly beyond the bend of the hook. When used with a small spinner, with either a single or double blade, this type of fly undoubtedly imitates a minnow flashing through the water.

An example of still another type of spinner fly is the favorite of Fish Warden Max Noll, of Montrose, which I have used with fine success for a number of years.

This fly has a thick body of dark red wool with a gold tinsel ribbing. The tail is a tiny tuft of red quill, and back over the top of the body extends a rather heavy wing of black squirrel fur.

This fly works especially well with a copper spinner about the size of a penny.

Incidentally, the angler will discover that almost any kind of wet fly that can be used with a spinner produces action.

The angler who tries his hand at fly fishing for bass for the first time must bear in mind a few fundamental facts.

First, he will encounter plenty of grief if he attempts to hook and land bass on the same delicate leaders which he uses in trout fishing. The bass is a rough and tough customer and calls for tackle to match. A seven-foot leader of six-pound nylon does a swell job with the larger types of bass flies, such as bass bugs and spinners. The less bulky lures can be handled nicely on a tapered leader with a point not lighter than 1X or 2X.

Secondly, the black bass is no push-over. He must be approached cautiously, and the lure must be made to look natural. The angler had best use the same tactics in bass fishing with flies that he has learned to associate with trout angling.

(Continued on page 19)

ICE FISHING

(Continued from page 7)

the flag and the line on the round stick will pay out until the fish stops running. Give the fish time to turn the minnow around in his mouth and swallow it, before you take hold of the line and strike sharply but not too hard, then bring him in slowly, hand-over-hand. Minnows about four inches, or five inches, are the best size for this type of fishing.

Now we come to ice fishing from a house or shanty. One or two men usually occupy a house about four feet square and six feet high. On some lakes houses are eight by ten, and occupied by six or eight men, but we prefer to fish from the four by four. In



It is legal to catch perch through the ice during the months of December and January. Not more than five tip-ups may be employed. There is no size limit on perch and the fisherman may not have in his possession more than 15.

the floor of this house is cut a hole to fit over the corresponding hole cut in the ice. A small door about three by two is cut in one side of the house, and care should be taken that no light is permitted to shine through. When this hole in the floor is placed over the hole in the ice, the fisherman is able to see all that is going on in the water. This enables him to study the fish and some of their habits—especially that one about not biting!

Observe Habits

You can watch the fish swim ever so slowly up to your bait, look it over, and then turn with no apparent movement of the fins and swim as slowly away. However, most of the time, pan fish will move right in and take your bait without hesitation. If you try to move your bait toward them, they will back up, then turn and go like a streak—off to

fish moves up to within a few inches of your places unknown. If in this slow mood, the bait, move the bait away from him slowly, and sometimes—not always—he will dash in and devour it.

Some few states permit spearing. In those states the spear fishermen use a good five-point spear about five inches wide and with a five-foot handle. Attached to it is a twelve-foot length of heavy cord. The spear is equipped with a thong, which is slipped around the wrist. Decoys are used to attract fish to be speared. A large minnow, seven or eight inches long, is the decoy. He is hooked through a back fin to a 1-0 single hook, to which is attached a six-inch leader with about thirty yards of thirty-pound test line.

The reel is fastened to the roof of the house so that if Mr. Fish rushes in and grabs the minnow and keeps going, he will strip the line from the reel. When he stops, he is lead slowly back into the hole where he is speared. The spearers make sure to let go of the spear handle otherwise, should the fish be large, it will twist free from the spear tines.

Even though a fisherman cannot use his favorite river runt plugs on this type of fishing, it is a great sport and an education in the habits of fish. Try it, the laws of Pennsylvania permit it, you hard-to-suppress fishermen! I understand five tip-ups are permitted in Pennsylvania.—Harrisburg Telegraph.



FLY ROD FOR MINK

(Continued from page 11)

off, won't you?" I stripped off gobs of slack.

"Here, take it, you can have the whole outfit if you want, Minky. Get off—get away from me—I'm sorry!" Visions appeared of the hook imbedded way down in his throat. Heartsick and scared, I moaned, "Why did this have to happen to me?"

A hasty glance around the lake revealed no help, no witnesses. There was one last resort, cut the line as close to the hook as possible.

"Maybe what I can't see won't bother my conscience so much." I let out a lot of slack, grabbed the line in my hand, placed the rod in the boat, opened the jack-knife and put it within easy reach on the seat; then, trembling and grief-stricken started dragging the mink in.

"He's tired and wobbling but he's got nothing on me . . . I'm wringing wet with consternation. The cork is in my hand—I feel for the knife—the line slackens—he's coming to the top fast—there's an EX-PLOSION a foot from my face—WHEeee-e-e—it's a BIG BASS!!!!"

How did that line hold when I threw him, by main force and relief, into the boat Ka-slap? A four-pound smallmouth. All that I could think of as the remaining 35 crawfish were gleefully dumped overboard, and I hightailed for home, was:

"You keep the mink—I'll take bass. Gee—what a swell day!"

The two largest walleyed pike this winter ever caught followed a plug almost to his feet before taking the lure with savage thrusts. Keep in mind that the walleye is slow to make up its mind, following the lure for some distance before striking. It's a good idea to impart action to the lure just before lifting it from the water. That extra will often induce a hesitant walleye to strike.

Seeing an angler using a grasshopper from which a fish already had nipped most of the body prompts the reminder that a 'hopper that has been mutilated even slightly is entirely worthless.—Connellsville Courier.



Big carp bite well on worms during the late winter and early spring. Be sure you carry plenty of line on the reel for when yow book one you will need it.

GOOD FISHING BETWEEN BRIDGES

(Continued from page 1)

had been taken it was placed on display in the coolers of the Nation-Wide store where many fishermen went to see it.

The other fish were taken by the trio, the other two members of which were Charles Eckert and Tony Gollick, both of McKees Rocks.

While in Cambridge Springs they stopped at the Park View Inn.—Cambridge Springs

"DOLOMIEU"

(Continued from page 2)

The sun next morning was casting its rays, shimmering golden shafts they seemed, through the symmetrical branches of the big white pine on the crest of the ridge shadowing the ledge pool in the creek. Jerry, carrying some planks and old burlap sacks approached the ledge, from which post of observation he planned to observe that male bass and its nest. Probably, at the moment, he had nothing more in mind than to prove the fish fellow dead wrong and (we must admit) to be able to tell the boys at the corner store about it. Be that as it may, he ensconced himself comfortably on planks and burlap. The only thing additional needed to rivet him there from daylight to darkness was clear water in the creek. Nature supplied that. From the human interest standpoint, we might add that his devoted spouse, Elma, had just about decided to call in the neighborhood doctor "to examine his head" by the time bass spawning had ended.

Now for the chronicle of his observations. On the first day, he watched that male bass poised over its nest like a slender black arrow. In the clear water, its pectoral fins seemed always in motion, keeping a constant circulation of water with its supply of fresh oxygen over and through the eggs. These eggs, the fish man had told him, were adhesive by nature—that is, they clung when deposited to the pebbles, sand or gravel of the nest, in contrast to the eggs of the brook trout, which, when left by the adult fish, did not cling to any substance in the spawning bed. That was the reason, too, Jerry understood, why bass, or any member of the sunfish family to which they belonged, could not be stripped of their eggs at the state hatcheries as were the trout. Instead, at the hatchery brood ponds, the adult bass were permitted to spawn just as they did in a wild state.

Jerry's "dolomieu" had been over the nest three days before the old fisherman had dropped a hook before it and had tossed the big smallmouth from the water as it promptly acted by instinct to remove the undesirable object from its nest.

Four days of balmy June weather followed. Then came that morning when, peering closely, from his perch not more than one foot above the water surface, Jerry could see unmistakable signs of life in the stony nest. There, before his eyes, was a swarm of young bass. It was difficult for the veteran bass fisherman, however, to believe that which he observed. Certainly those tiny black objects lying inert on the clean gravel bed of the nest resembled not

in the least the parent fish from which they had sprung.

"Leetle black tadpoles, by gorry!" muttered old Jerry, and casually observed, those baby bass seemed to have been well described. Attached beneath the forepart of the body of each was a sac, the yolk sac, upon which the young fish would subsist for a period of from ten to sixteen days. The yolk sacs, on the first day of their existence, seemed to assume monstrous proportions on these tiny black slivers of life. It seemed almost inconceivable to Jerry that they would one day develop into grand game fish, capable of stripping the line with swiftness through the guides of his rod. But there they were; there, hovering, slender and graceful above them, was their guardian, the sire that had given them life.

There had been moments, though, when Jerry had watched with bated breath events that had transpired in the vicinity of the nest of eggs, despite the grim ferocity of the male bass guarding them. Two days before they had hatched, a gross, lumbering fish had nosed its way blunderingly through aquatic vegetation and approached the bass haven. An involuntary cheer had forced its way through Jerry's parted lips as that magnificent broad-girthed fighting fish over the nest, its spiked fins bristling, had lunged like a greenish bolt at the big carp. Almost laughable was the carp's retreat.

After the eggs had been hatched, each succeeding day seemed to bring new wonders in the development of the baby fish. At the start of their allotted time on the nest, they had lain dormant, the heavy yolks seeming to hold them to their bed. Then, as the yolks were gradually absorbed, the brood of tiny black slivers seemed to rise, each day, a trifle higher in the water above the spawning bed, sinking back to it with the coming of darkness.

Gradually, that uncouth shape, so like a minute tadpole to Jerry's eyes, assumed the perfect shape of a sturdy young bass. But there had been another moment, when these helpless young were lying practically dormant on the nest, that the old bass fisherman watching them had feared for the safety of the brood.

The new menace was totally unexpected. A school of five sunfish had approached the cove. Apparently, undaunted by the grim aspect of the guardian bass, two of the school made a short sally toward him. The first effect of this strategy was instantly apparent, for the big male promptly lunged at them. In that brief moment of his absence, the other three sunfish descended greedily upon the helpless young smallmouths. Only the sire's immediate return averted serious inroads upon the bass brood. Then, probably grown wise through successive seasons of spawning, he refused to be lured again into the sunfish trap. Finally, these impertinent panfish had cruised away.

Came that eventful morning, twelve days after the bass brood had been hatched, when the baby fish swarmed virtually to the water surface. Then, almost as though on a given signal, the swarm "broke." Pairing off, and in some instances, in groups of threes and fours, these graceful baby smallmouths scattered along the shoreline of the big stream flat. Almost every tiny cove with its sheltering pickerel weed seemed to harbor at least two of these youngsters. "Little

monkey fish," Jerry humorously termed them, for at this stage their curiosity toward everything moving seemed a predominant instinct. They would approach any foreign object dropped near to them and then, comically, their pectoral fins quivering, would back away from it. Their sire, incidentally, had deserted his offspring on the day before the swarm broke. Jerry, four days later, observed, with almost unbelieving eyes, the swift killing surge of this formerly devoted parent in pursuit of one of the young he had guarded so zealously.

Jerry was fishing his favorite lure, crayfish, for bass one day in September when the fish fellow happened along.

"Well, Jerry, did you watch that nest?" the fish fellow asked.

The old bass fisherman pondered this question deeply for perhaps a minute, then:

"Mister, I shore did. Reckon, I know now why bass time don't roll around 'til first of July. Reckon, I'd never again take no bass off the nest, an' I don't wanter see any other fellow try it. But say, mister," he paused, "seems that old he-bass went to a lot o' trouble jest to take care o' his own grub."

Then, in response to a ponderous jerking strike, he stripped line from the reel.

"Maybe this is that four-pounder," he said hopefully.

FLY FISHING FOR BLACK BASS

(Continued from page 17)

It might be mentioned, too, that the angler will learn how sporting some of our panfish are when he seeks out the black bass with flies, for fallfish, rock bass, and sunfish find great attraction in the lures which are used for smallmouths.

This article, finally, does not pretend to cover completely the subject of fly fishing for bass. But now that somebody has brought up the subject in this round-table of Pennsylvania anglers, it is to be hoped that others will make their contributions to the storehouse of lore on this fascinating field of the great sport of angling.

What About The Big Ones

(Continued from page 10)

but larger fish are taken. But on the other hand there are those who acquire joy from specialization and complete satisfaction from a great fish once in a while.

Here is a game in which one toys with Dame Fortune. There are different approaches which are all sound, but they are all uncertain. The pioneering field is plugging with casting spoons and light bait casting lures. The common approach is the fishing of: minnows, worms and other live bait in the holes and big riffles. The fly rod with big wet flies, streamers and bucktails and spinners too can do the job.

It is satisfying to know that there are great trout about and that the stream supports them, nevertheless it is best that they fall prey to the fishermen. The man who connects with the big ones is serving well, for with the removal of each, the supply of fish in the stream is protected.

THOSE SPRINGTON BLUEGILLS

(Continued from page 6)

of which weighing better than eight ounces each.

Another time, early in August, plugging for bass from the banks near the Gradyville Road Bridge, each time on the retrieve a small school of bluegills followed the plug in and every so often they would poke at it making no attempt to grab it. Result, no bass that day, but I did take home several of the little critters, taken on a number ten streamer tied with a silver tinsel body and having white and light blue bucktail. One other time some were taken on a very botchy looking attempt to represent the black-nosed dace, so nicely described by W. R. Walton in The Angler of March '42.

All in all these amiable little fellows afforded me so much sport and pleasure this past season, in the few number of hours that it was possible for me to go fresh water fishing, that I feel that he should be dubbed

the Good Prince of the Fresh Water Fish Royalty.

Springton Reservoir has plenty of small mouth bass in it and some huge golden carp and it is too bad that you are only allowed to angle on the banks for a few feet from each end of the bridges. Maybe after this terrible conflict is over, restrictions will be lifted and perhaps boats will even be allowable. Then we'll be able to get out where the bass and perch are but should the bass not want to cooperate there will be the prince with the azure gills waiting to be caught and carried home to give you a fish meal that is second to none. Incidentally, the bass out of the reservoir are very muddy tasting but the bluegills from the same water are sweet and delicious.

Of course being rated a pan fish it should be fried, very carefully. Clean and scale, cut out the fins (not off) run a very sharp thin knife blade in close along side of the dorsal fin and it can easily be pulled out. Salt and pepper the little critter, roll him

Bill Wolf, one of the Pennsylvania outdoor writers, is pictured working on the Springton bluegills.

in yellow corn meal instead of floor or bread crumbs and fry in fat or oil that has been heated to about 350 degrees or until it just starts to smoke a little. Only put one fish in at a time, waiting a few moments before adding the next one, so as not to cool off the fat. Sneak a look under the edges and when one side is golden turn them very carefully so as not to break the crust. Brown the second side and when done drain quickly on paper and serve at once. To be a little more elaborate garnish with chopped parsley and lemon slices. Delectable! Delicious!!

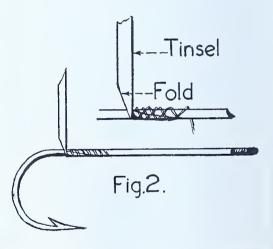
WHEN THE WILLOW-GRASS BLOOMS

(Continued from page 4)

desired. I have not previously seen this method described or illustrated although probably it is known to many.

But to return to the fabrication of our fly, the butt is black ostrich herl about 4 turns. Unfortunately one cannot longer filch such plumes from his wife's or sister's hat since fashion (that crazy dame) has decreed the turban or worse still the babushka.

The body is of orange chenille wound forward to where the wings are to be tied. At the bases of these, before placing them, I tie in about 6 strands of peacock sword tail herl. This is of glittering, brilliant green and extends back about to the bend of the shank.



The wings are of paired golden pheasant tippet feathers and tied in with a little water-proof cement at their bases. Next are attached the shoulders of jungle-cock, if you have them or can get them. These feathers, on account of the shape of their shafts, are difficult to place exactly where one wishes them to stay. However, be informed that there is no law against sticking them fast right at this place with water-proof cement, letting this dry and then tying them in firmly. The hackle, brown plymouth rock, is then tied in and the fly is complete. This makes so pretty and alluring a fly that I could snap at it myself-had I any snappers left.

Experience of many years in waters as above defined has prejudiced me strongly in favor of yellows and reds for smallmouth bass. However, I know expert and successful fly men who will have nothing else but Silver Doctor, Coachman or Yellow Sally—and more power to them.

**FISHING for sport is very genteel, but fishing for fish brings more action.'

There is no record of the name of the wise man who made this observation, but he must have been a grizzled old veteran of the trout and bass streams-probably an old-timer who began his sport with a willow pole cut along some creek and with a gob of wriggling worms impaled on a rusted hook tied on the end of a length of twine.

Had he possessed any idea that he was a king of angling super-man, he never would have written this bit of philosophy, which it seems to this observer might be written on

the inside of many tackle boxes.

Far too many fishermen forfeit a lot of pleasure because they are trying to keep up with the Joneses of angling, putting on a false front, and reaching for the moon. They are getting all embroiled in the technical and scientific fields of fishing, and they are reaping a harvest of misery and disappointment a lot of the time.

They have lived so long that they have forgotten the days when they began fishing.

Take trout fishing for example.

Years ago all anglers admired the man who could spin a minnow in the fast water or fish night-crawlers in the pools and make great catches of native trout. Today some anglers shy away from minnow and worm fisherman as if he had leprosy. All the same he continues to catch trout while his critics tie their nerves into knots and whittle down their bank-rolls by getting mired deeper and deeper in the swamp of 20-foot leaders and size 20 nymphs and especially designed trout rods and the study of the moon and the tides and the barometer.

The best fisherman I know isn't a scientific angler at all. He's the best fisherman, in my opinion, because he fishes for fish, yet is a sportsman in the true sense of the word.

He likes to fish for trout with dry flies, but if conditions demand it he also likes to fish for trout with worms. A fly and spinner is his favorite bass lure, but he's willing to toil for an hour in the hot sun getting some live bait if that is what the bass demand.

He doesn't worry if the wind is out of the East, or if the barometer is falling, or if it is the period of the full moon. When he has time off-and he is a busy man, too-he goes fishing.

It's a safe bet he didn't pay more than \$10 for his best rod, and his line cost not more than \$1.50.

The much debated question whether fish can distinguish between colors, and conjecture as to what a floating fly or darting plug look like to a fish do not enter his head seriously. And he has a couple of battered old plugs that serve him well.

He prefers a black bass bug. Why? Darned if he knows, except that he's caught a lot of nice bass with black bugs.

My ideal angler makes a habit of just being himself. He reads the fishing magazines and the long discussions they contain on the science of fishing; maybe now and then he even envies the wise men of the sport. But when he gets astream he's just himself. He's tolerant of the other fellow besides.

I know he isn't, but he might well have been the angling philosopher who wrote:

"Fishing for sport is very genteel, but fishing for fish brings more action.'

SPORTSMEN CONVENE

The Fish and Game Association met in the C. V. Hose Company building to start plans for reorganization. Due to the fact that the war has taken so many sportsmen away from Shippensburg and nearby localities, the association will reorganize and elect officers. It was decided that election of officers will take place at the next meeting on Decem-

John Warren, Walnut Street, was installed as the temporary secretary until that time and he will work with R. A. Warren, Montgomery Avenue, acting temporarily as president. R. A. Warren, who was formerly the vice-president, was in charge of the meeting. -Harrisburg Telegraph.



"Why, hello, Brunswick, hmmm—why don't you do that good on the rifle range?"

ELECT KANE CHAIRMAN OF SPORTSMEN'S BODY

Meeting in the Chamber of Commerce Building, the Northeastern Division of the Pennsylvania Federation of Sportsmen's Clubs elected the following officers: Benjamin Kane, Susquehanna, chairman; Andrew Hutchinson, Pleasant Mount, vice chairman; Henry W. Strohl, Noxen, treasurer. There was a contest for the chairmanship between Kane and Hutchinson with the former win-

Delegates from Monroe, Wayne, Susquehanna, Lackawanna, Wyoming and Carbon Counties were present. A resolution passed months ago asking that surplus money in the fish fund be spent for water purchases and improvements was discussed and the secretary, Charles Costa, was unanimously instructed to write Commissioner C. A. French requesting a report on the program. No signs of action have been discovered by the sportsmen in the last year of French's administration.

The shortage of shotgun shells was discussed and although the shortage exists it was decided that sportsmen would have to depend upon the government to release whatever shells it could spare for shooting purposes. The group also talked about the draught condition and the serious low water in streams and recommended that the fish commission delay any trout stocking until rain restores the streams to normalcy thus protecting the fish through the Winter.

FISH AND GAME CLUB **NOMINATES OFFICERS**

A slate of officers was selected by the North Penn Fish, Game and Forestry Association, which met at the Nuss Restaurant. James Moyer, retiring president, declined the renomination on the score that he is subject to induction into the armed forces.

Nominees for president were Albert Berner and Roland T. Moyer, tax collector, of Sellersville. Other nominees include Edward Bibic and William R. Michener, Jr., for vicepresident; Harry Mosser, for treasurer (incumbent); George Weiss, Herbert Moyer and John Burns, for secretary; directors to be named by the incoming president.

Election will be held at the next regular meeting at the same meeting place.

New by-laws will be drawn up by a committee appointed by President Moyer, consisting of the following: Dr. Floyd Frederici, chairman; Albert Berner, George Weiss, Edward Bibic, David D. Cressman.

War Bonds will be given as prizes in a contest to acquire new members of the organization for 1944. The campaign is under way now. The Sportsmen voted a donation of \$10 to be given to the local National War Fund committee.-Perkasie News

A.W.A. CLUB IS RENAMED

Sportsman's Organization Becomes Fort Crawford Sportsman Association

The A.W.A. Sportsman club held its annual election of officers at the city building.

Kenneth Rhodes, popular sportsman, was again elected president of the organization by a unanimous vote. Reeletced as chief instructor, was Cliff Bickerstaff.

Upon completion of election, new officers took charge and discussed a new name for the organization. Fort Crawford Sportsman association was chosen.

Other officers elected were the following: Ed Carnahan, vice president; Allen Alex, secretary; Fred Grau, treasurer; Mr. Ferguson, range officer; Cliff Bickerstaff, assistant range officer; C. Wolf, game commissioner; Fred McKean, fish commissioner; John Anchors, Sr., archery commissioner; Mrs. C. A. Bickerstaff, social supervisor, and Julia Pfingst, assistant supervisor.

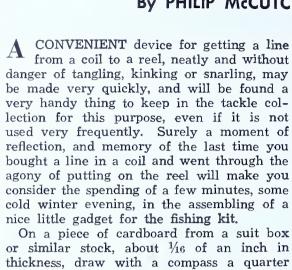


Tater Swank, inveterate fisherman and fly tier of Lewisburg, catches some big bass on plugs.

BUY BONDS

A DEVICE FOR UNCOILING COILED LINES

By PHILIP McCUTCHEON ARMSTRONG



On a piece of cardboard from a suit box or similar stock, about ½6 of an inch in thickness, draw with a compass a quarter of a circle using a 10¾ inch radius. Using the same center, draw two other quadrants, with radii 10¼ and 6½ inches respectively. Between the two outer circles draw a series of lines about ½ inch apart, using the center as a guide for angularity to the circles. This should appear now as in Figure 1, a.

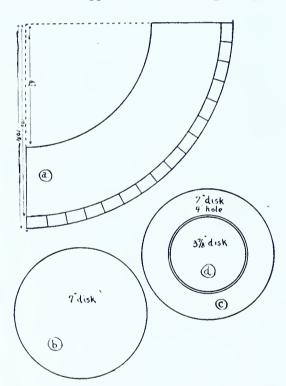


Fig. 1. Parts for cardboard line uncoiler.

Cut it out with a pair of scissors, discarding that portion within the dotted lines.

This piece forms the truncated cone of the coiler, shown complete in Figure 2.

Slit the portion between the two outside quadrants, on the lines. These segments will function as flanges to glue the cone to the base.

Now draw two 7 inch circles on the cardboard, and cut them out with the scissors. These disks will form the base of the device, and will act as a flange to keep the coiled line on the cone, should the coils become slack.

On one of the disks draw two more circles, with 2 inch and 115/16 radius respectively. Cut out the 4 inch circle carefully with a sharp knife, thereby forming a washer, which will become the upper part of the flange, outside the cone. Cut the 3% inch disk from

the scrap piece. This will form the upper part of the flange, inside the cone.

Glue the 3% inch disk to the 7 inch disk, lining them up by inserting a needle through both compass holes, and put a weight on it until dry.

Now bend the flanges on the quadrant outward, and coil it tightly around the 3% inch disk. Mark the point of overlap, and remove it. Draw a line to the imaginary center of the quadrant to mark the line of the overlap when the cone is glued up. This should, of course be exactly in coincidence with one of the radii of the original circle, and it is helpful to draw two or three guide lines with a pencil at about the expected point of overlap while the center is still available, before the quadrant is cut out. The overlap, at the base is approximately 4 inches, for secure glueing.

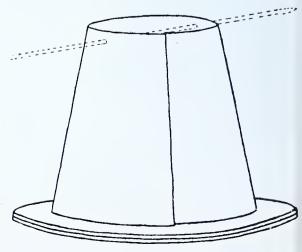
Glue the cone on the line indicating the overlap, and leave it until completely dry. Paper clips will hold it while drying.

Now apply glue to both upper and lower sides of the flanges of the cone and to the exposed surface of the disk to which the 3% disk has been glued, as well as to the edges of the smaller disk. Fit the cone down over the 3% inch disk, and press the cone firmly down so that the cone flanges are in contact with the larger disk. Now apply glue to the washer, which will form the upper disk, and push it over the cone, and down on the flanges and the lower disk, and apply weights or spring paper clips until dry.

When the glue is entirely dry the edges may be sanded smooth, and a coat of paint applied, if desired. Celluloid enamel is the best for painting cardboard.

To operate the device pin it to a board by means of a stout needle, mounted in a stick so that the center hole may be reached through the top of the cone. The needle acts as an axle. Still better is a large round head screw, fitted with a washer, the compass holes being enlarged with a rat-tail file to permit free rotation of the disk on the screw.

The coiled line is dropped over the cone, on which it will settle until snug. The retaining ribbons on the coiled line are now cut, and the end of the line attached to the reel. Except by gross carelessness, it is im-



ig. 2. The cardboard line uncoiler assembled. Knitting needle used only for recoiling.



ICHNEUMON FLY

One glance at your four wings, and I Know for certain you're no fly. Flies have two wings, bit with their head, You sting with your tail instead. The ovipositor is as sharp as a pin, Long and slender and you drive it in! All of your children are parasites, Caterpillars whet their appetites.

CARSTEN AHRENS.



Mrs. Charles A. Berger of Lake Side, Edinboro Lake placed the heads of the muskie and bass she caught during the past season on a pole in her back yard.

possible for the line to kink or tangle as the reel is cranked.

By thrusting a knitting needle through the top of the cone, as shown by the dotted lines in Figure 2, the line may be recoiled neatly when desired, and may be tied up, or left on the reeler for storage, ready to be replaced on the reel again in the Spring.

If you are not satisfied with the size or shape of the cone, and are mathematically inclined, you can easily calculate the constants of a quadrant better suited to your needs, or by using the method which follows, you can approximate any given shape without elaborate calculations.

First decide how wide the reeler is to be at the base, how high, and how wide at the top. Then draw on a large sheet of paper the line AB, the length of which will be that of the diameter at the base. At the center, erect a perpendicular line VW. Measure off on this line, from the center of AB (Point X) the height desired XY above the line AB, and mark off another point, F, about half an inch below X, to provide for the lugs to which the flange will be glued.

At point Y, draw the line CD, parallel to AB, which will be at right angles to XY the length to be whatever the diameter of the top of the reeler has been selected to be.

Draw through AC and BD lines intersecting the vertical line VW (they should intersect at the same point if you have measured carefully), extending the line half an inch or so below A and B. The quadrilateral ABDC will now represent the vertical cross section of the reeler, which is a truncated cone, that is a cone cut off somewhere below the point or Apex, which is at Z.

Now, using point Z as the center, draw a sector of a circle through C and D, another through A and B, and a third through F.

As every point on the base of a cone is equally distant from the apex, the circular curve passing through A and B will describe the base of a cone which has been unrolled and lain flat on a plane surface. It is now necessary only to determine how long the sector must be to cover the surface of the cone. It must be, of course, as the circumference of the circle which is the base of the cone, plus a little extra for gluing overlap.

Elementary Geometry tells us that the circumference of any circle is equal to the diameter multiplied by Pi (3.1416). Therefore, if the diameter is to be, say, 4 inches, the length required around the curve passing through AB will be 12.5664 inches, plus another inch or so for the overlap, let us say about 14 inches, which would be 3½ times the diameter, or 7 times the radius.

But we have no simple means of measuring the length of a curved line, so we must employ a subterfuge. The sector AH is exactly half the sector of the diameter.

As the sectors of a circle are proportional to the angles inscribed when lines are drawn to the center, and as the length of the straight line across the arc is always the same for the same angle. In the case of the angle b, which measures half of the angle measuring the arc AHB, the straight line AH will also measure half of the arc of the diameter.

We may therefore measure 7 times this curve by spacing off, by means of the dividers, 7 times, as is shown in the drawing, and the point G may be connected with the

point Z, which will give us our desired segment of the circle. When this is cut out, it will roll up into the truncated cone, with enough overlap for gluing.

If you want to calculate the whole business, and have a table of trigonometric functions handy, you can save quite a lot of close drawing.

To determine the radius of the sector AG and the value of the angle b, we have known, because we have selected their values, the lengths of XY (which equals AC) because it is the height of the truncated cone, and the radii of the top and bottom of the truncated cone, ½ CD (or CY) and ½ AB (or AX) AE, of course, is equal to AX minus CY. With these known elements we may state:

(1) Tan angle b equals AE/CE. This gives us angle b, by reference to the trigonometric tables.

(2) Radius AZ equals AE/cos b.

Lacking the tables, AZ may be determined by using the law of proportionate triangles and the theorem which states that the square of the hypothenuse of a right angle triangle is equal to the sum of the squares of the other two sides. As AE and CE are known, we may determine AC:

- (1) AC equals the square root of (AC plus CE)². Then with AC known; AX also being already known, we have:
- (3) AC/AE equals AZ/AX or AZ equals (AX times AC)/AE.

Having determined the radius AZ, we may start to draw circles, prick off AB on the sector, bisect AB and establish point H.

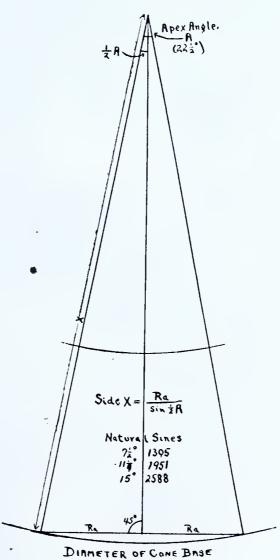


Fig. 3. Method of calculating diameter of segment.



JUNEBUG

You're a beetle, not a bug, because
You have no beak but chewing jaws.
You're quite nocturnal, so each night
Knock off your head against each light.
Careen through the air like a driverless machine.

Strike with a bang the lamplit screen.
Egyptians thought you sacred, put you on a
crest:

Most folks in the U. S. A. regard you as a pest.

CARSTEN AHRENS.

Then step off AH 7 times on the curve, and the job is done.

Or if we prefer we may calculate the length of the straight line AG thus:

Angle AZM is equal to $3\frac{1}{2}$ times angle AZH, that is $3\frac{1}{2}$ b. Also Angle AZG is equal to 7 times angle AZH, that is 7b. We have then;

- (1) AG equals 2 sin angle 3½b.
- Or AG may be calculated, if preferred thus:
- (1) AG equals square root of (2 AZ² minus 2 AZ² times cos 7b).

With these calculations made, all we have to do is to draw by measurement the triangle AZG within the circle drawn to measured radius, and draw the other two circles, also to measured radii.

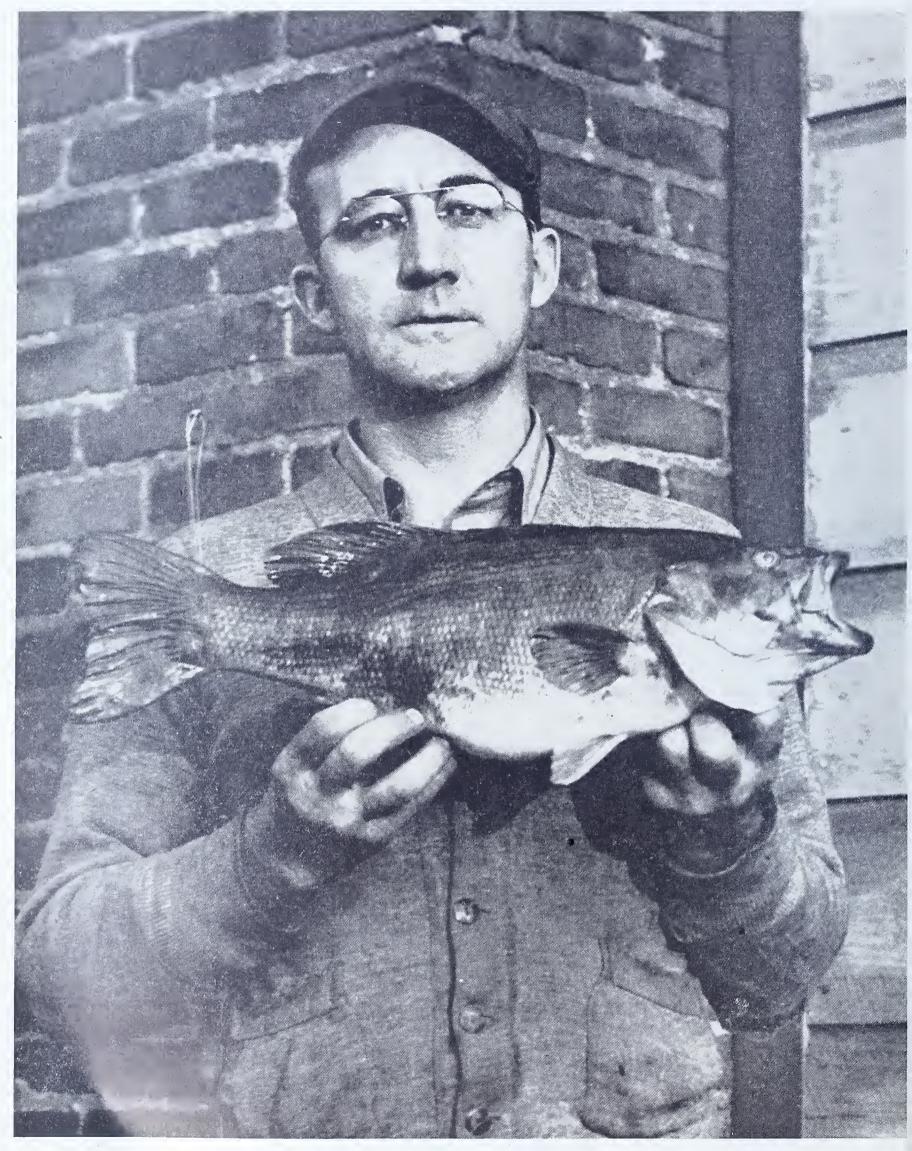
"Give me your name and address," barked the clerk to a dusky draftee.

"Whas zat?"

"What's your name and address?"

"Seems lak yo' ought to know-yo' all sent for me."

Fish close to the shore when the wind is kicking up the surface of stream or lake. The wind blows large insects off shore vegetation into the water, and the fish are lying in wait for such morsels. A floating fly, a bassbug, or a spinner and fly are good lures under these conditions.—Connellsville Courier.



Meet the Champ. Roy Boyer of Harrisburg caught the largest smallmouth bass ever reported to the Fish Commission in the Susquehanna almost within sight of the Capitol. One day in November, while plugging with a River Runt he hooked, played and landed this 7½ pounder which was 23½ inches in length. Photo courtesy of Harrisburg Evening News.



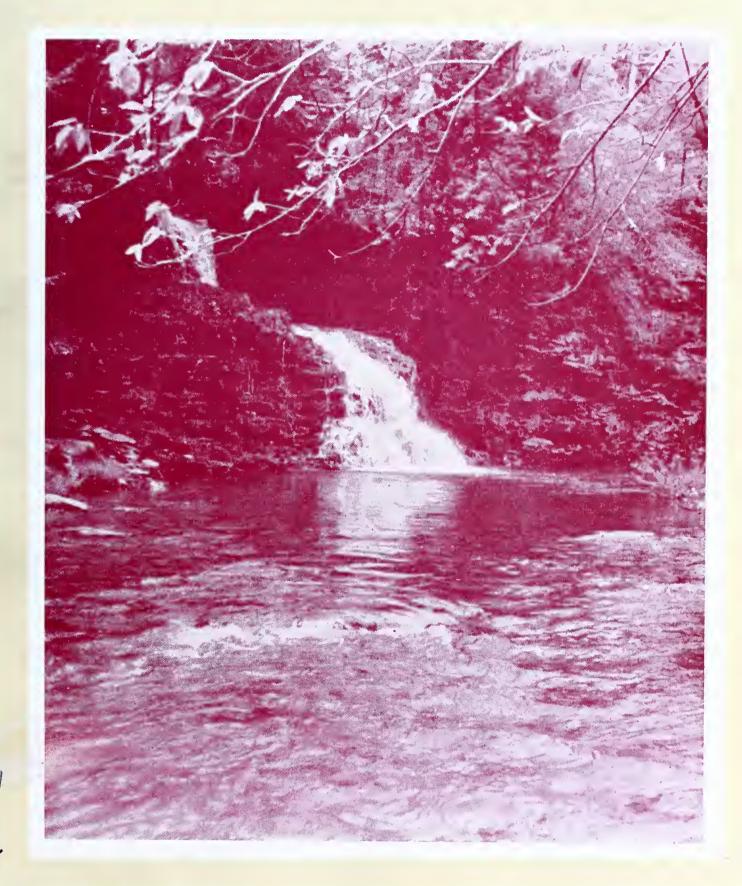
FISH FOR THE FUN OF FISHING

A full creel is like a weight on the shoulder and the mind of the thinking angler; for if he thinks, he will know that he is taking more than his share, and in so doing is depleting the source of future sport for himself and brother anglers. Better one or two good fish in the creel with the rest carefully put back as an investment in future sport—or better yet, leave the creel at home!

Penna. Board of Fish Commissioners.

Fishing licenses are now available at the offices of the County Treasurers

ANGLER



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EDWARD MARTIN
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PREDATOR CONTROL

Jules Du Bois of Midway has been very active in trying to keep the number of predators in his hunting and fishing areas below the danger point.

In 1936, his first year of competition in a vermin control contest, he won the first prize of \$25 in cash by eliminating: 2,465 water snakes, eight unprotected hawks, three destructive owls, one weasel, forty-nine crows, nineteen stray marauding house cats and fifty-six starling.

In 1937 the Washington County League offered a prize of \$10 to the man killing the greatest number of water snakes, as well as \$10 prizes in other vermin contests. In all a total of \$60 was offered. Jules Du Bois won \$40 of the \$60 by destroying 878 water snakes along with other predators.

In the 1938 contest he killed 794 water snakes. In view of the fact that no prize was awarded in 1939 and 1940 he kept no record of his activities along this line.

A Supreme reel was given as a prize in 1941 and this was won by Du Bois with his 680 water snakes.

These records are authentic for each piece was checked and counted by members of the Washington County Sportsmen's group at Club meetings.

Other records of this one man are as follows:

1936—600 water snakes in one day.

1936—3 great horned owls in one day.

1937—17 Cooper's hawks in one day.

1938—3 weasels in one day.

1940—2 foxes in one day.

1941-57 crows in one day.

This, Du Bois explains, was done so that other more valuable forms of wildlife could survive and multiply.

He writes, some of these records seem almost impossible, for instance 17 Cooper's hawks in one day. I had located two nests and was watching them carefully. One day when I approached one of the nests one of the parent hawks came screaming at me. The twelve gauge took care of it instantly and cleanly. I climbed the tree and found three young and one egg that failed to hatch. At the base of the tree I found another broken egg. We later trapped the old male at the nest and it had a partly devoured quail.

We then walked three miles to the other nest. We destroyed the female and five young.

After this we started to hunt crows, but we discovered another pair of Cooper's hawks hunting food, so we decided to try to locate their nest. Some time later we found the nest and easily dispensed with the parent birds. This clutch consisted of five young.

On one of our water snake hunts we discovered 31 under one rock and 19 under another stone. We also killed a copper-head on the way to the creek. When I say, we, I mean my young son and daughter.

The average sportsman feels that since man, through his hunting and fishing activity, has altered the balance of nature predator control is essential to protect the effected supply of game and fish.

BACK THE ATTACK—BUY WAR BONDS

IT TAKES TWO RODS

By SPARSE GREY HACKLE

Copyright 1944, By A. W. Miller

PANKING a child may injure his spine.

I use the middle joint of an old fly rod," said the Rodmaker, virtuously.

'Jeepers!" I gasped, for a stick like that raises a welt as thick as your thumb. "Doesn't it hurt?"

"I guess it must," agreed the Rodmaker, after thinking it over. "I know one thinghe hollers like hell."

Well, I didn't guess-I knew. And how I knew, goes back to the time Archie Carruthers and I fished at Nameless Lake.

He was born here but his folks were English, and in 1915 he joined the British Army, although he was only a schoolboy. Archie must have been very good; in fact pals of his that I met afterward told me he was wonderful. They said he was utterly brave and fought hand-to-hand like a tiger, but besides that he was cool as ice, crafty and quick-witted. He was a colonel at twenty, for promotion was by machine gun, in those days.

He came home with a large collection of chest hardware, the quiet manner of a man who can only be pushed so far before something terrible happens, blowtorch blue eyes and forearms like a blacksmith. And he was just as crazy as ever about fishing.

It was about 1931 that we went to Nameless Lake for bass. At this hotel there was a widow, a swell-looking woman, but with a ten-year-old boy who was the worst brat I have ever seen. He was a holy terror to the other kids, a burden to the help, a pain in the neck to his elders, and an affliction to his mother. He was always in trouble.

His mother had no control over him. When she tried to reason with him, he would put on a tantrum which would quickly reduce her to tears, for he had a ferocious temper which he could turn on and off at will. My hands often itched when I was around him.

The widow was in tears, in fact, this day when we met her on our way up from the boat landing. And that explained the sound which we heard, up at the hotel. It sounded like a bull being roasted alive, or a wildcat wringing off its claws in a trap, but it was just little Hector, putting on his act because his mother had tried to change his dirty pants.

The Colonel listened impassively, but I could see the hair stir on the back of his neck. Absentmindedly, he began to unscrew the top of his rod case.
"I think I can quiet him," he said, in

gentle, soothing tones, to the half-hysterical widow. "Just give me a few minutes with him. Why don't you walk down to the village? You'll feel better for it. You might get me a pack of Chesterfields, if you will," he added.

His face was calm, but his eyes told me that something was cooking and he didn't want her around the stove. A moment later, he was striding toward the hotel, carrying the middle joint of a dry fly salmon rod.

We found Hector face down on the floor, in a room from which everyone else had fled in panic. His face was purple, his fists were clenched, his toes drummed on the floor in fury, and a continuous deep, hoarse bellowing issued from his wide-open mouth. He was an imposing sight.

But not to Carruthers. He crossed the room in two strides, like a tiger pouncing on its prey, seized Hector by the collar with one hand and with the other he brought the rod down in a drawing cut across the seat of his pants. The Colonel could cast a hundred feet sitting down in a boat, and that was his full hundred-foot stroke.

Maybe you think it is impossible for anyone to bound into the air from a prone position, but I know differently! At the whistling smack of the bamboo, Hector rose in the air and floated around the room like a captive balloon, holding his afflicted seat with both hands. His screams rose a full octave in pitch, and doubled in volume.

Instantly, Carruthers laid the second shot squarely across the flying target-and, incidentally, all ten of Hector's fingers-with a full swing and a wrist cut. Hector's hands were flung wide and waved wildly; his legs danced furiously, and his body arched away from the rod. His screams rose to a pure soprano.

The third shot did the business. It raised a puff of dust from his dirty pants and brought a volume of sound which nearly shook the plaster from the ceiling. Hector dropped down and rubbed his smoking backside against the floor, while tears and words of repentance flowed out of him in streams. The Colonel put the rod down; after all, when a boy says, fifty or sixty times, in that tone of voice, that he will be good, you just have to believe him.

Eluding a number of people who wanted to shake hands, we made for the boat landing-we didn't want to be around when the widow changed Hector's pants. On the way, I remarked that he was, as the old saying goes, indeed a pup.

"The kid's all right," said the Colonel, "He's just abruptly, and surprisingly. woman-raised. No woman can raise boys right."

Two noteworthy things happened subsequently. The first was when the Colonel encountered the widow, the next day. She fumbled in her handbag, then stepped up to him with blazing eyes, exclaimed furiously, "Here are your cigarettes, sir!" and flung them in his face. Carruthers did not change countenance, but his neck got brickred and his eyes spat blue sparks. He had a temper, too.

The other event was when we came across Hector, a few days later, standing on the beach and trying desperately to throw a plug far enough out to reach a feeding bass. We stopped to watch. The bass was working back and forth, fifty feet from shore, while Hector could only throw twenty feet. It was too deep to wade.

He had the kind of rig a woman would buy for a boy-cheap steel rod, stiff as a poker; coffee-grinder reel; big, heavy line;

and a quarter-ounce plug. Hector's face was red, but he was keeping his temper, and he was using every atom of skill and strength that he possessed to try and coax a little more distance out of that impossible combination of tackle.

We watched him quite a little while. Then the Colonel tightened the backlash control on his reel, unhooked the plug from the crossbar and went over and tapped Hector on the shoulder.

"Try this," was all he said.

It was a Thomas tournament rod with a Supreme reel, a light line and a plunker surface plug. The rig was worth \$65 and it looked it, but Hector took it without turning his head and with scarcely a glance at it. His eyes were glued to that fish with the awful intensity of a man stalking his first big one.

His wrist snapped up and then down, and I held my breath waiting for the backlash. But the Red Gods must have realized that a little boy has to have a break once in a while. They made that plug go out in the prettiest 50-foot cast you ever saw! The bass hit it the instant it touched the water.

The Red Gods must have hooked the fish, too, for Hector never did it. When the bass struck, he was still standing, pop-eyed and transfixed, with the rod dangling loosely in his hand. The sight of that plug flying fifty feet through the air had paralyzed him.

The Colonel never spoke a word nor moved a muscle while Hector found the reel handle, took in the slack, and then staged a fight with more thrills in it than the Dempsey-Firpo match. After he had beached the fish-quite a while after-the kid remembered about the rod which he was still holding, and held it out to the Colonel.

"Thank you," he said, probably for the first time in his life.

"Sir!" amended the Colonel, sternly. "Sir," Hector added to his thanks.

The Colonel looked consideringly for an instant at the rod.

"Like it?" he said. "Keep it." walked away.

Carruthers was-and is-like that. Just the same, I think he got his money's worth. The look on Hector's face was something I have seen but few times in my life, and I still like to remember it. And I guess, after all the blood and agony the Colonel had seen, that it looked good to him, too.

The rest of the story is that I met Carruthers in Washington, the other day, in the uniform of an American colonel, with General Staff insignia. We spoke of old times and I reminded him of Hector and his sore backside. "He's probably hung, by now," I said.

With the practiced motion of a man drawing a pistol, Carruthers whipped out and handed to me a newspaper clipping, soiled and worn from much handling.

It began:

"For his heroic rescue of a crippled Fly-(Continued on page 19)

FISHIN' FOR FUN WITH "WETS" AND "STREAMERS"

By SCOTTY

THERE is a wide spread opinion as to what methods one should use to be successful when fishing with wet flies and invariably one man's method is as good as another's. Therefore, far be it from me to attempt to convey the impression that the methods I suggest are the only practical ones. That would be tolly, but if I can pass along a little information which may help the readers of the ANGLER, the purpose of this article has been fulfilled.

Streams and weather conditions call for an assortment of styles, and what proves successful today may not work tomorrow. However, the fellow who achieves the best results in any kind of fly fishing is the chap who has an assortment of methods in his "bag of tricks."

A number of years ago it was not clearly known why a trout bit at a wet fly and the general impression at that time was that a wet fly was one that had lived in the air and had fallen and become waterlogged in the river, and it was only about the beginning of the century that students of fly fishing started to make a careful study of what a wet fly really did represent. The most apparent clue that a wet fly was not one which had been in the air was the fact that badly worn or very sparsely tied wets got the better results and from that it became apparent that wet fly fishing was in reality a form of nymph fishing. The only difference was that the wet fly duplicated the nymph which had freed itself from its underwater covering case or was struggling to leave the water for life in the air, and since its wings had been freed it was necessary to try to duplicate its actions under the surface. This called for a different technique than nymph fishing and the writer's opinion has always been that best results could be obtained by fishing wets across and down, casting the fly across and slightly upstream and allowing the water to carry the lures under and after the fly had passed between the angler and the opposite bank it should be given a slight lift or drag (but very slight) then drop the point of the rod a little and repeat this slight lift or drag at short intervals until the fly is directly below you. If this does not get results, cast directly across from where you stand and repeat the slight lift or drag until the fly is again directly downstream from where you stand. The difference between those two methods simply is that you are working your fly a little closer to the surface on the second method, than you are in the first. If both of these methods fail to get results cast across stream and slightly down and continue to use the drag or lift as explained but do not jerk the rod too severely in doing this. This you repeat each time using a slightly increased downstream and across angle and when you find the angle they hit at, you have the correct feeding level on wets. At least for the time being. Sometimes it will be necessary to change flies often in order to incorporate the rightfly with the right method, but better than changing flies

and guessing at what the trout might hit, is to find the most matured nymph which is in the river on the particular day you are fishing. Use that until trout start "bulging" then use the wet fly which starts coming through and that will be the adult to said nymph.

Another method is to use the "skittering method" of wet fly fishing. The way I like best to do this is to use two or three flies to the leader and cast across and slightly down in fast or fairly fast water. Carry the rod tip high until your top fly (the one nearest to you) just touches the water, and as the fast water swings your leader around, the top fly will "skitter" and your other fly or flies will have a wavering type of motion as they come across the water. As explained, best resul's in this method can be had in fast or broken water but no lift or drag is necessary.

You will get a lot of bites by this method but will find fish hard to hook but this way is the restful or should I say lazy method, especially if you have been fishing and wading upstream. Yet it will produce a lot of fun. Another method of wet fly fishing which is very successful in still or slow water is to cast across and a little upstream, allowing your fly or flies to settle very deep, and after you have found a maximum depth, give them a slight lift and allow them to settle again. Repeat this until leader straightens out downstream directly below you. This method often produces some big trout but fewer numbers than some of the other methods suggested.

The writer's experience with wets has been best served by using sparsely tied flies, since big wings and heavy hackles serve no purpose when fishing wets.

A great deal depends of course on your own judgment and you must be the judge of "what fly or what water will produce what." By that statement I mean this-let us assume we are fishing in June-downstream-and that we start fishing in some broken or stony water with maybe a dead log here and there. This might truly be labelled-nymph or wet water and such lures should be tied in such a place, but as we move downstream we may come to a run with gravel, sand or silt bottom, with a grass bank on the deep side. The writer would put on a grasshopper and fish that stretch close to the grass bank where hoppers were being provided as the trout's natural food. Should we go under a large elm tree, we would probably put on a green nymph which would come close to imitating the green elm worm. The fisherman must be the judge of when to change and what to change to. So much for wets.

Streamers

Perhaps more big fish are taken from our streams on "streamers" than by any other artificial lure and the methods of fishing them are varied to about the same extent as in wet fly fishing.

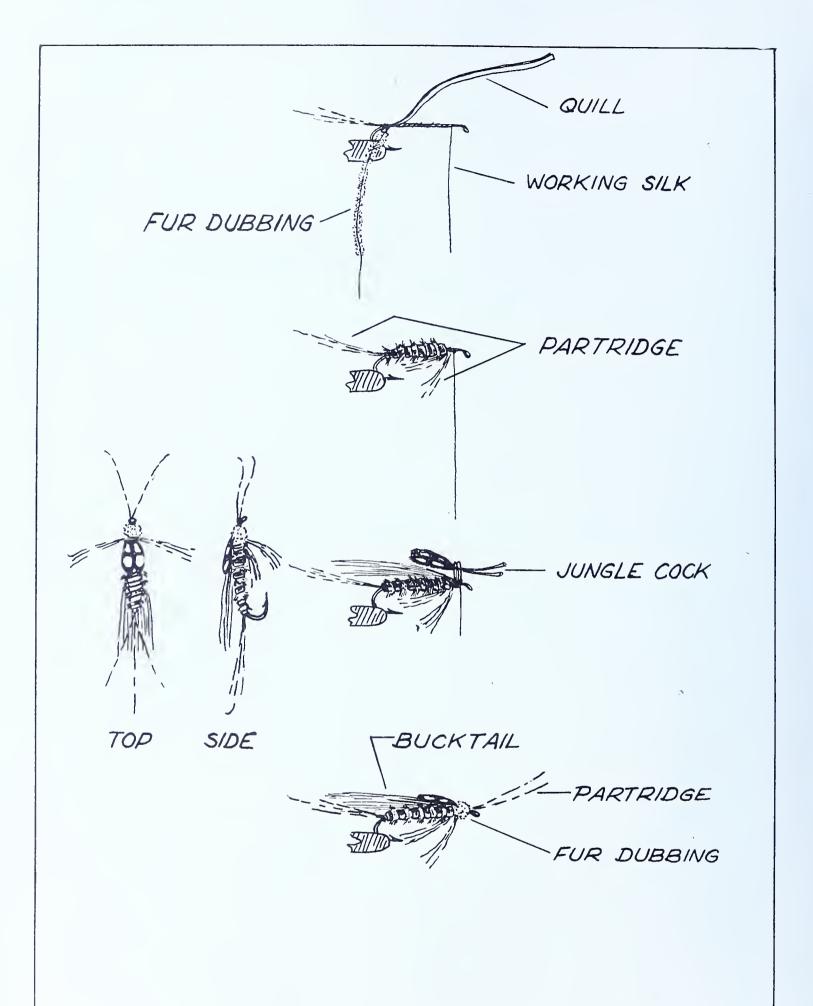
The big difference, however, is that a streamer imitates a minnow and must be worked to do just that. Therefore a very

different procedure is followed than that explained in other methods of wet fishing. Here again there is no set rule which an angler can go by and one must be guided by water conditions which will more or less govern your actions, and will determine what to use and what not to use, as each river you visit will have an assortment of water. Even if the stream is at normal there will be fast streamy water, broken white water, slow water, pool necks (or run ins), pools and pool tails (or run offs). Each different type of water will call for a different action being put into the lure.

The first thing to remember is that you are imitating a minnow and to do that one should study each piece of water before he starts to fish it. Fast or broken water will call for only a slight action being put into the lure, while slow water or pools will call for a maximum of lure action. Minnows frequent streams which are more or less shallow. They of course frequent pool run off, back waters, etc., but they are frequently washed from such places either by becoming panicky when river birds dive for them or from other reasons which drive them into fast water or rather water that is too fast for them. A large foraging trout for example may cause them to scamper from their natural haunts, which will drive them into fast water, deep pools, or other con-ditions out of their elements.

A minnow caught in water too fast for it is washed around in a jerky, rolling, struggling fashion which if he happens to be a shiner type of minnow will cause his belly to flash "silver" in such water. A muddler or bullhead type minnow with his yellow type belly, will flash a "golden" type yellow, but no matter what type of minnow he is he will dart in his natural short jerky way in his efforts to get into safe water. That is the action you should attempt to duplicate because it is the natural action. To get this action into a streamer cast directly across or across and slightly upstream and immediately start working it by the following method. Take the line in your left hand between the thumb and knuckle of the forefinger, palm toward you. Turn the hand and the line over until palm is upwards, turn left hand away from you into a palm up fashion and the streamer is given a short jerk, and as the left hand is brought back into the original position it gives the streamer the appearance of a minnow which is swimming by short darts in a hurry to get into safe water. This hand turning method starts when the streamer lands and is continued until the streamer is directly downstream below you, when it is best to finish out the cast by short jerks of the rod tip until the minnow is almost beached; (each cast should definitely be fished out completely since trout often follow them right up to the edge and grab them when the minnow is apparently getting away into safety). In fast water turn your left hand with line over and back as explained at slow intervals, and in medium

(Continued on page 20)



THE MIDGET BUCKTAIL ACTUAL SIZE

Ed LEONARD 44

AMERICAN FLY TYPES AND THEIR CONSTRUCTION

STREAMERS AND THE MIDGET BUCKTAIL

By EDSON LEONARD

USUALLY Streamers and Bucktails, of which there is an endless variety, are imitative of minnows, or at least a small, apparently edible form of fish life. Of later years there has been introduced a style of bucktail whose indorsement by particular anglers has proven its ability.

Hail the Midget Bucktail!

It differs in some respects, chiefly in its application to hard-fished waters. However, while the construction of the lure does not require any appreciable departure from the conventional streamer make-up, the dressing is somewhat modified, but most noticeably sparse. In addition it has many characteristic advantages not to be found in the older style and pattern, and consequently is capable of surprising results on "off" days, especially, and excellent averages throughout the season, generally.

This innovation is a combination of nymph and streamer, is of necessity an active type and is handled with comparative ease when using even the lightest of leader tippets. This alone has always been a problem. So often an angler has wished to use a larger lure in conjunction with his light terminal tackle only to find that the leader could not sustain the lure. This has been discussed in most quarters. The writer has viewed the problem from every approachable angle and until the Midget Bucktail made its appearance, all manner of experimenting had been far from satisfactory.

I found the Midget Bucktail solved the problem in every respect, even to the extent of using 4X tippets without any more regard for their failure than when handling the common wet fly, size 12 and 14.

By means of these tactics I have interested many noble trout during the 'lowwater' periods when aspects were negligible. While it is true that casting must be performed with normal delicacy, as is the case in any manner of fly-fishing, this will further improve ones opportunity to wet his landing

bow more frequently.

In the strict adherence to streamer policy and design, this style of artificial should lead the trout to believe the object which he is contemplating is a stray little fella who has wandered too far from his protective shore line home. On the contrary, the Midget Bucktail seems like a luscious nymph who has sacrificed his burrow to go on about his daily but mysterious business.

To obtain this appearance so far as constructing the lure is concerned, the following values must be considered: first and probably the most imperative, the lure must be active; next, it must be dressed sparsely and on a light weight hook to allow the combination of delicacy and light leaders without breakage; last, but equally important, the bucktail must sink readily to attain the depths required.

This is quite an order. To comply with these requirements is not easy, rather it is difficult. However, I am including complete descriptions later in this article.

One point should be stressed. Artificial nymphs may be remarkably imitative so far as coloration and shape matter, and to the human eye such may seem satisfactory if not exceptional; but relative to a lifelike action and deception, they are strictly nil. Trout are far more subject to natural movement of their quarry than to a remarkably accurate duplication from the artist's viewpoint. Keep this in mind and the score will mount rapidly in your favor. To cite an example, let's consider one of the times we have been scholarly enough to study our favorite stretch of water, at which time a powerful field glass was used. The trout in question were not leviathans, were the size one encounters on the stream daily. From indications, these trout were concentrating on nymphs, what with the flash of their rolling sides giving ample evidence with an occasional sub-surface boil to describe the swift ending in the life span of more venturesome creatures. Our glass was directed toward this activity until several trout loomed large within its confines. For many minutes these trout fanned the water, darted, rolled, fed with rapacious appetite on deep going nymphs. And the very instant one of the nymphs rolled, his fate was described by means of a flashing tail and the swift closing of a hungry mouth.

At the time I wondered why dead members of this group of insects should be ignored completely, which they were. Ostensibly the trout were in not the slightest manner interested in them. This observation set my mind to task, with the result that for several seasons I attempted to devise a "natural" which would almost wriggle of its own dictation. Quite naturally none came forth and I was back at the beginning of the process, ultimately resorting to oversize streamers to provide that required wriggle. (Oversize here in the sense that the streamers were larger than the nymph—not that they were huge enough for tarpon or sharks.)

Being a constant believer in fishing for fishing's sake, and enjoying the thrill of dropping a cast within a fair maiden's hair width of the exact spot, I angled and wondered. Objectionably I would forego the chances of a tight line to which trout so thoroughly enjoy their grubbing, until like all lovers of the angle, I resorted to questionably ingenuity.

Among my filled fly boxes I rummaged to find a sample streamer which another well meaning fly fancier had forwarded to

me. It was dressed on a medium long shank hook, size 8 at the bend. Like all well known streamers, it consisted of a grizzly feather, partridge hackle, buff quill body and garish red feather tail. Certainly it would be a fine Bass lure. But the buff quill body arrested my attention. Now for the modification!

Wire cutters eliminated all of the hook bend from the shank, scissors clipped away most grizzly streamer until not more than a dozen slim whisks remained. The hackle was thinned out with the scissors plus the hot end of a cigarette. With this hookless monstrosity attached to a 4X leader tippet, I sallied forth, first looking in all directions to see if I had been observed by a fellow angler. To have been caught would have caused me greatest discomfort and chagrin, however, such attitude was soon forgotten after I had approached and set the ugly "fixin's" into action. Of course I could not catch a Trout without a barb and bend on the hook, but the strikes, rolls and flashes were sufficient compensation for my misgivings. I gloated, unrigged my gear and quit for the day, completely absorbed in my

At first my attempts were usual: fair or poor. To incorporate the three qualities of the Midget Bucktail was no easily mastered challenge. But through the process of eliminating certain and many materials, hook shapes and types, body furs, feathers, etc., the Midget began to assume the ideal. Eventually, with a further understanding of how to manipulate it, I took trout with it, trout which otherwise would have remained in the stream until some other angler, far wiser and better should claim them.

I first used the Midget eight years ago. according to my log. It is another reason why I am an exponent of the underwater fly, such having been intimated in my former articles in the ANGLER. The Midget has caught many fine trout to be creeled in the lens of the camera, these same trout having been tempted with all manner and form of both natural and artificial. It is not infallible. If it were, our angling adventures should lose most of their flavour and the chances are the writer would not be telling anyone else about it. But it will bring strikes at least when one is ready to believe that creatures with scales no longer inhabit watery places.

Pete Young, my former cohort, before he too enlisted in the Marine Corps, was a never-say-die dry fly angler. And a good one. His appreciation of the Midget was politely reflective of my own enthusiasm, but that was the limit. Until one day which marked the last fishing excursion for us as a

(Continued on page 19)

FLY CASTING, THE EASY WAY

Part II WET-FLY CASTING

By JOHN ALDEN KNIGHT

W ET-FLY casting consists, for the most part, of simple, forehand casting such as has been described in the first article of this series. However, there are times when wet-fly casting can become complicated. Obstructions, adverse currents, lack of space for the back cast—all of these things present problems for the angler most any day he goes fishing. Most of these problems will be dealt with later on in this series. For the time being, it will be just as well to adhere to fundamentals.

To be a good caster, one should be able to cast from any position, no matter how cramped. To do this, it is not necessary to learn to cast with either hand. To a right-handed caster, the right hand is the one that has been trained throughout his lifetime to perform motions requiring precision and exact coordination. Why, then, complicate matters by training the left hand, at this late date, to perform motions that can be done better by the right? It has always seemed to me that training the left hand to do a precision job is an admission of inadequate training of the right.

The Backhand Cast

Backhand casting is not difficult, and it is a valuable asset in your bag of casting tricks. Once you learn the knack of it, you can cast with your rod to the left of your body just about as well as you can in the normal position. It requires no explanation from me to point out its advantages.

As stated in the first article of this series,

the caster should remember always to have the palm of his casting hand face the direction of the cast—the spot where he wishes the cast to go. This applies to backhand casting just as it does to forehand casting.

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To learn the backhand cast, raise your casting arm so that the forearm is almost parallel to the ground, with the back of the hand directly in front of the chin and the palm facing the direction of the cast. Now, place the rod grip in your casting hand while it is in this position, thumb on the side, just as has been explained earlier. Remembering to keep the back cast high, execute the casting motions just as though you were making a simple, forehand cast. Plate No. 1 illustrates this position. For purposes of instruction, it has been made



Fig. 6. Application of power to the forward cast as demonstrated by Jack Knight.

somewhat extreme, but it can be modified to suit the comfort of the caster as soon as 'the motions of backhand casting are understood. Use the exaggerated position at first and then modify it later to a more comfortable one.

The Straight Line

Strange as it may seem, casting a straight line is, perhaps, the most difficult of all flyrod casts. The reason becomes evident as soon as you analyze what a fly rod does as it passes through the full forward arc of the cast. Suppose, by way of illustration, you are casting fifty-five or sixty feet of line—enough to furnish ample line load to put all of your rod to work. The line is picked up and the rod pauses at the top of its arc until the back cast straightens to the rear. Then the forward cast is started and gradually accelerated up to the final application of power, with the "throwing

in" of the upper rod at the point of release. Exactly what happens at that point?

With the average fly rod, there is not enough strength in the upper ten or twelve inches of the tip joint to deliver, completely, all of the power necessary to drive the line forward. Consequently, the bulk of the power of the cast is delivered at some point in the rod below the tip, instead of at the tip itself. The power having been transmitted to the line, it begins its journey forward, and the unused portion of the rod (that part between the tip and the point from which the power of the cast has actually been delivered) follows through with the line. Being resilliant, the unused portion carries on, past the position where the rod once more is straight, so that it dips down and then up again. This rebound transmits a wave, or "hump," to the line so that it does not travel forward in a straight line but rather in a line that is

quite wavy and uneven. The more final flip or "throwing in" of the tip at the finish of the forward cast, the more "hump" there is in the line as it travels forward. Plate No. 2 is a rather extreme example of what can happen if too much power is applied at the finish of a forward cast.

To throw a straight line, the amount of power to be applied at the finish of the forward cast is a matter to be judged by the caster. Too little, and the cast lacks power to complete itself properly; too much, and a crooked line results. The degree of power application varies with the length of line being being used and with the way the back cast happens to be thrown. It is not the same with any two rods. There are no set rules to control it or to aid the caster in applying just the proper amount of force. In other words, it is one of the refinements of casting that must be learned through (Continued on page 16)

Fig. 8. The finish of a long cast.

TOUGH STREAMS MAKE GOOD FISHING

Get a New Thrill in Angling by Choosing the Brooks That Are Hardest to Reach and Also to Fish

By DICK FORTNEY

If the trout had been striking in the stream we set out to fish that afternoon, we probably would not have noticed the trickle of water emerging from a small gully in the side of the mountain. But the trout were not striking, and Howard and I lolled on the pine needles in a patch of shade and resigned ourselves to the prospect that we would have to wait until the sun set to see any action.

The water was unusually low and the sun fiercely hot, which added complications to the fact that the stream we were fishing was widely known and worked hard by other anglers all season.

"Wonder where that water is coming from," said Howard, who was the first to pay any particular attention to the trickle on the rocky shore across the narrow stream from us. "We'll have to wait a couple of hours until it cools off, so what do you say to a bit of exploring?"

Physical exertion in that heat was not appealing, but the hour we already had spent in that spot, even including the eating of our lunch, already seemed like a week, and if it would make the wait seem shorter I was willing to make the effort. We waded across.

A close inspection of the brooklet almost discouraged us. It was barely enough to wet the rocks, and through the dense undergrowth ahead of us we could see no sign of any greater volume ahead.

But the water was icy cold to our fingers, and we pushed through the tangle. The way thinned out after a short distance, and we could see moss-covered, rotted remnants of logs which at some time long past had apparently formed some kind of a road along the side of the hollow. The walking was easier, but the stream still no larger.

Ahead of us the ravine made a sharp bend to the right, and Howard suggested that we go at least that far before turning back. He was itching for a chance for us to use the rods we had carried along.

We both stopped in our tracks as we approached the corner of the ravine. At our feet was a clear pool of water roughly twenty feet in diameter and almost perfectly round. In front of us the water was not more than a foot deep, but at the far side we could not see the bottom. From a shelf of rocks at least thirty feet higher than our heads the brook dropped in a thin sheet of pure water, yet with a flow so light that the sound of its plunge into the

pool below had not been audible until we were within ten or fifteen feet of it.

A great log lay crosswise in the pool, and fortunately we had been able to see it from a sufficient distance to be able to fade into the woods, climb the steep bank to the top of the falls, and then peer carefully over the edge to the water below.

"Ye gods!" exclaimed Howard.

I couldn't even speak.

For that deep pool was teeming with trout, and although most of the fish were small, we suddenly awoke to the realization that we had stumbled on a piscatorial gold mine.

Howard carefully extracted a small grasshopper from the cage at his hip and dropped it over the falls. The instant it touched the water below it disappeared in a swirl as half a dozen trout raced one another to gulp down the tidbit.

Fishing from the high ledge was quite impossible, of course, and anyhow we wondered, suddenly, whether this stream could offer any more such surprises. We decided to continue with our exploring.

Above the falls the stream took on quite a different character. It was a typical mountain trout brook. For a quarter mile we walked along its sparkling riffles and quiet pools until we came to a fork where two small branches merged to form the main stream, and there among the rocks we discovered that the source of its water was a flattened spot that was literally covered with bubbling springs.

We saw probably a hundred trout—closer inspection proved them to be brookies—in that quarter mile.

One fish in particular attracted our attention. It was shuttling back and forth between an underwater ledge beneath which it could hide and the upstream end of a narrow pool in which it lived—and the trout looked black as a chunk of coal.

There was just room enough to toss a dry fly out on the water with an upward flip of the rod—and the trout took the lure at once. It was a brookie eight inches long, and the deepest colored trout we had ever seen. Howard said it felt like a chunk of ice in his hand as he carefully removed the fly. Back in the water, it scurried to the safety of its ledge home.

We had a lot of fun with the brook trout on the way back to the falls, in spite of the fact that not one of them was large enough to deserve a place in our creels.

I insisted that Howard make the first cast in the falls pool, since after all it was his idea that we go exploring. I stayed up on the rock ledge, while he slipped down the steep cliff-side and circled through the woods to a point below the pool from which he had room enough to cast a dry fly. He aimed for the center of the pool, and he



Tough streams make good fishing.

used a Light Cahill in Size 16, one of his favorites.

From my point of vantage I saw what happened then.

The fly alighted delicately on the water, cocked perfectly and without a trace of drag, and began slowly drifting with the current across the pool toward Howard.

As it passed beyond the sunken log a fish appeared in the depth and arose slowly toward the surface and the floating lure. Very deliberately it took the fly, and still without hurrying it turned back toward its hiding place. Howard set the hook with a light turn of his wrist, for to him the fish appeared to be just another small trout we had found in the stream.

I could see, however, that it was a good fish, and Howard realized that fact when he felt the restraint of the hook. The struggle was spirited, and when it ended Howard scooped up with his landing net a brook trout nearly eleven inches long.

It was the only fish we kept out of that brook.

Only when the trout was in the creel, and I stood on the rocks beside Howard and, with him, admired its beauty, did we realize that the sun no longer shone and that the afternoon had almost passed.

A glance at our watches made us realize, suddenly, that we had spent four hours on this lovely bit of water and had enjoyed ourselves so much that we forgot all about the heat and poor water that had stopped our fishing in the main stream at the noon hour.

Afterward, when we took time to think over our experience, we could find quite logical reasons for the sport that we had enjoyed.

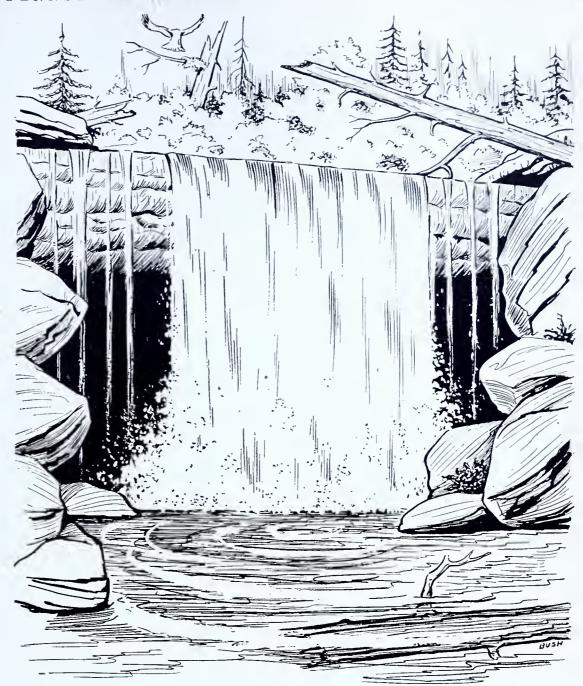
In the first place, the stream was located in a deep, if miniature, ravine, and the sun did not have the opportunity to heat the water. Tied in with this fact, naturally, was the experience of fishing a stream that neither of us had visited before, so that we had no idea of what we would find from one pocket to another.

But more to the point was the obvious fact that other fishermen, if they saw at all the trickle at the mouth of the brook, had given it no further thought. For the whole length of the brook we traveled that afternoon showed no sign that others had been before us.

As a result, the trout in the brook were undisturbed, and none of them had been killed off.

Still another factor was fishing conditions we encountered along the brook from the waterfall to its source. It was the toughest kind of fishing. Casting a fly was possible only in a few scattered spots, and even using a grasshopper presented difficulties. More than once we fished a pool while we stood shoulder deep in undergrowth and handled our fly rods high in the air, with only the leader and a couple of feet of line beyond the rod tip. To reach some of the pools we had to work our way upstream and float a dry fly or a grasshopper on a slack leader and line down a riffle into a pocket of quiet water. The problems we had to solve made the sport still the more enjoyable, we both agreed.

But the experience of that summer afternoon went even farther—and this is the thought behind this article.



The pool at a falls is always interesting.

If you want good trout fishing the season through, hunt out those streams which are the hardest to reach, the most difficult to fish, and apparently the least likely prospect for good angling. And you may, incidentally, apply this principle to angling for bass as well as for trout.

In your search for the unlikely stream keep this principle in mind; a stream is not always what it seems at first glance. In the case of our mountain brook, we discovered that the water which flowed out of the falls pool seeped into the ground or wandered in little side streams to other parts of the ravine, with the result that only a small part of its flow ever got to the main creek. An angler not taking the trouble to investigate it would quite naturally conclude that the trickle at the side of the main stream was nothing more than the overflow from some mountain spring, of which there are many in this particular section.

Particularly is the tough stream a boon to anglers late in the season, after the more easily accessible waters have been thoroughly whipped by other anglers for week after week, and when weather and water conditions are likely to be all in favor of the fish.

There are a number of reasons why this is so:

1. The hard-to-reach stream usually falls into that classification because it is located in mountainous territory or where underbrush is thick and formidable, with the result that it is protected from the searing rays of the summer sun.

2. It is small (or other anglers would frequent it) and therefore it has been left undisturbed in its natural state, providing adequate shelter for the fish that live in it.

3. The trout in such a brook are seldom, if ever, disturbed, so the difficulty of angling for them is offset by their willingness to investigate an angler's lure.

For the real sportsman-angler, however, there are other features which are even more important.

For one thing, the unfrequented stream will provide him a welcome change from the monotony of the waters he usually fishes, and it must be admitted that even the most rabid angler becomes bored, toward the end of the season, with the streams he fishes time and time again.

At the same time, the wilderness brook will provide him new angling problems that he would never encounter on more easily fished waters—and the solution of new angling problems is well more than half of the fun of trout or bass fishing.

(Continued on page 18)

THE LIEUTENANT SHEDS HIS WINGS

By FRED EVERETT

Illustrations by the Author

THE Lieutenant sat propped up in bed. His bed tray contained a mess of junk. Feathers, colored yarns and threads, beeswax, varnish and all the other miscellaneous whatnots that delight the heart of a fly-tier.

The bed was littered with pieces of this and that, including bits of feathers and trimmings. A few dirty dishes containing part of a forgotten meal reposed precariously near one edge of the bed. Old flies and new ones were stuck here and there within reach. To say the least, Lieut was having one grand time.

The flu bug had hit Lieut shortly after the first of the year. Too many hours on the job at the airplane plant had lowered his resistance, so the germ moved in and started raising a big family. That bug was a real mathematician, for he certainly could multiply fast. By the time Doc was called in, Lieut couldn't even tell a fish story, he was that sick.

It was some ten days later that Lieut felt able to sit up. Like Old King Cole, the first thing he did was to call for his favorite. Only it wasn't a pipe—it was his fly-tying outfit. He just couldn't lie there in bed, doing nothing. He knew Doc would raise cain, so he timed his fly-tying when he felt sure Doc wouldn't come in.

The first couple of days Lieut got away with it because he wasn't strong enough to do much tying. The third day, however, he felt rather cocky and time slipped by faster than he realized. He had been sitting up most of the afternoon, when Doc parked in the driveway.

Lieut scooped up his material and, as best he could, hid it under the covers. The dirty dishes on the tray, he slid under the bed. Rather shakily, he pulled the covers up to his chin and realized he had become chilly. Just then Doc walked in. Lieut kept his eyes closed, as though asleep.

Doc came quietly around the bed and sat down beside his old friend. He held his hands on the radiator to warm them before touching his patient. It was a blustery February storm outside. Coming to see Lieut was one of the restful highlights of Doc's weary wartime routine.

For a few moments, all was quiet. Lieut tried to breathe regularly. Then, of a sudden, Doc gave a snort. In spite of himself, Lieut winced.

Doc's voice boomed out. "Open those eyes, you idiotic, weak-brained, senseless faker, you! What do you think you're doing, kidding me?"

Lieut opened one eye. "Oh—hi-ya, Doc. You here?"

"Something tells me you're not all here. Of all the empty-headed stunts. Look at that bed!"

"Why, Doc, you don't mind a few crumbs, do you?"

"Crumbs my eye. The only thing that could make that mess is fly-tying. How long've you been sitting up?"



"Oh—a couple of minutes, maybe."

"Here, let me feel your wrist. That pulse is like a triphammer. Haven't you any brains at all!"

"Aw—forget it, Doc, I'm feeling fit to fly."

"Listen, it isn't that I care so much whether you fly to the Pearly Gates or not, it's my reputation that I'm worrying about. What would it be if I let a healthy horse

like you fly up the flu just because you haven't sense enough to rest when you have a chance? Do you want pneumonia next?"

"Speaking of flying, Doc, I've given up my wings."

"What do you mean—given up your wings? The day you stop flying a plane, it will be a Doctor of Divinity who attends to your remains."

"Look, Doc, you don't understand. Here, let me show you. I've figured it all out while wasting my time in bed."

Liuet pulled the fly box from under the covers and dumped out his new flies. He sorted out a few and put them in Doc's hand. Doc gave what was to have been a disgusted, disapproving look at Lieut, then turned to the flies. In spite of himself, he grew interested.

In his palm lay four kinds of beautifully tied dry flies. Not one had a wing, yet they were tied exactly like regular winged flies. They rested daintily on his hand.

Quizically, Doc turned to his beaming patient. The flush on Lieut's cheeks was not from fever, unless you can call an inner fire of enthusiasm a fever.

"Well, what do you think of them?"

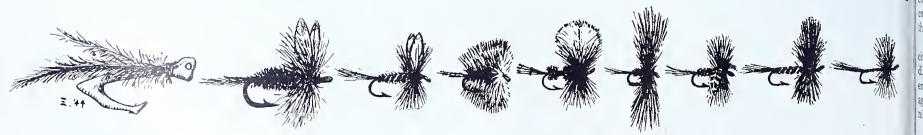
"Looks to me as though you were too weak and butter-fingery to tie on the wings. Anyone knows that's the hardest part. Put that stuff away until you're able to do a decent job." Doc wouldn't say a good word for those flies if Ray Bergman and Rube Cross together had tied them, although he knew they were beautifully made. In fact, they intrigued him.

Lieut grinned. "I've had a lot of time to think, these last few days. I've been going back through the years, re-fishing some of the high spots in my career as a fly fiend. And I've come up with a rather surprising fact. Evolution! Evolution in dry flies!"

"What do you mean, evolution?" Doc was caught in Lieut's net without realizing it.

"Just that. Those little gems of piscatorial delight have been undergoing a slow but undeniably whimsical yet definite transition. From the first day an enlightened heathen—no doubt an ancestor of mine—tied the first feather on a crooked bone and pulled out the first lucky victim of Nature's noblest art, flies have been evoluting."

Doc looked solemnly at Lieut, put his hand on his patient's cool brow, pressed down his lower eyelids for a look at their color, and finally said, "Let's see your tongue!"





Lieut opened his mouth and gave full play to his tongue.

"Say ah!" Doc commanded.

"Ah-h-h-Nuts!"

"Hm-m-m—just as I thought. A couple of days in a dark room, with absolute quiet, may bring you out of it."

"Out of what?"

"That superannuated conception of the extreme infallibility of your introspective capabilities for analyzing the complexities of the inherent propensities of aviatorious concoctions. Now, don't be alarmed—it won't be fatal if you'll only be calm and relax."

Lieut picked up the flies Doc had dropped. He fondled them gently while he talked to them. "Listen to that wizened old fossil with the soul of a pickled catfish. Confidentially—he uses worms! He even pre-scribes worm medicine. Some day, the worms will get him. He has no heart, no soul, no love for the beauty of artistic conceptions or the richness of the finer things in life. The joy of a well-balanced fly is not for him. Its magic is lost in the depths of his ignorance. Only a select few are blessed with that inner vision with which to behold the exultant glories of the piscatorial heavens. Poor soul, he is lost,"

Doc shook his head in mock sorrow. Then he sighed and murmured; "I'm not sure whether to call in some consultants or to commit him myself. Maybe, since he is not yet violent, I better humor him." He turned to Lieut. "Oh-a- just what was that you said about convulsions in flies?"

"That, my good doctor, is what happens when you try to use one."

"Hm-m-m—I see, a reversion to humorous antiquetus. A common symptom prevalent among conceited nincompoops. Much more normal than I had hoped. Maybe you could explain to me this extraordinary discovery of yours which probably not more than ten million sportsmen know."

"My dear Watson, your lack of perspica-city is fundamental. There is a significant difference in knowing that there are different patterns of flies and that, through the ages, those patterns have undergone a definite evolution."

"Oh, I see. And you, I am to understand, are the one and only who realizes that difference. In fact, the little flu bug told you."

"Sickness has its compensations besides those decreed the working man by law. It gives a man time to think. Time to relive his past and to sort out of his memories, certain gems of truth that may be matched and strung together to form a valuable necklace of fact. That is how I suddenly came to realize that there has been a definite trend, throughout my years of experiences as an expert with the fly, from a rather crude conception to a more artistic, yet more effective pattern of dry fly."

"You really believe, do you, that your socalled flies are far superior to those of

yester-year?"

"Definitely, my dear Watson, definitely." "My, it must be grand to be so smug. Just how, my dear Holmes, did you arrive at such a miraculous conclusion?

"Fundamental, Watson, fundamental. You see, I merely looked back on the flies that used to be, compared them with those in my hand—and there you are. Simple as that." "Hm-m-m can't say I see any improvement.'

"That is because you are looking with your eyes. You've got to look with your brains, my dear fellow. You must see not only what they look like, but their potentialities. That is the difference between a simple fisherman like yourself and an intelligent angler like myself. The one sees the fly; the other, what the fly can do.

"Back in the old days, when first I ventured into what was then called the sacred mysteries of dry fly angling, and you were still stretching the backbones of baby trout, victims of vulgar worms, to make them long enough to put in your creel, little was known about dry flies. Oh yes, there were those who thought they knew and who wrote reams of advice on how to use the flies.

"But what flies they were. Crude, un-balanced, and lacking in the essence that flies today require if we are to catch the educated fish of our times. In those days it did not take skill to fool a trout. Flies were new-any old kind was good enough.

"Don't shake your head, Doc. Remember those trips back up into the headwaters in Canada? Few fishermen had visited those waters. Trout were so thick you couldn't see the bottom of the pools. And what happened? They took any and everything we threw on the water. Was that sport? Even you tired of the monotony of it, and that's saying a lot.

"That's the way it was some years ago before the automobile brought the hordes who cast flies on the waters thicker than a plague of insects. In those days it was not a matter of fooling or appealing to the trout. It was rather a matter of tying flies which pleased the eyes of the fishermen. Even today, most so-called anglers demand that type of fly. Fly-tiers make their money tying pretty flies for their customers and at the same time help conservation. They tie a different fly for their own use if they are real experts.

"To please their own artistic souls, rather than because it was a necessity, and, also, to have something to write about and to use as a selling point, fly-tiers began to study the insects and to make imitations. They matched colors, used wings, put on longer tails and strove to balance the flies so they would land and float upright. Lighter and better tempered hooks were



Long shanks, short shanks, upmade. turned and downturned eyes, square, round and off-center bends were all given a try.

"Various schools of thought arose. Arguments became long and hot on the various patterns, styles, shapes and sizes of flies. Color was and still is debatable. Thus interest increased, magazines made hay in the sunshine of ardent controversy, and fishing received a boom.

"The flies, however, were still made to please the eye. Trout were plentful and easy to fool, so the expert and not-so-expert had plenty to prove their points because they caught fish. What they failed to realize was that everybody was catching fish regardlless of the type or pattern of fly, its color or its size. Or even how well or crudely it was presented.

"But, with the sudden increase in the number of fishermen, the trout became thinned out and grew more wary. A great lull came in the success stories and the cry arose that the streams were all fished out. Thus artificial propagation came into being and, with it, the belief that it was the salvation of fishing. Yet, during those times, certain anglers caught as many trout as ever. They were the exceptional few who realized that the trout were becoming educated. That it was no longer enough to throw onto the waters what looked good to human eves.

"Thus a few grand old experts, like E. R. Hewitt, came to public notice. Through them, anglers began to realize that, to successfully fool the trout, one must first know how flies looked to the trout. Looking at an insect in the hand is one thing; looking up at it from under the water is an entirely different thing. Even today, only a few fully realize the difference.

"The winged fly gave way to an all hackle fly. Then, for better visibility, rather than to fool the trout, white was added, making the bivisible. For a short span, this fly gained great popularity. Not only did it take trout, but it was easy to cast. No matter how it landed, it was just as good.

"However-it didn't look enough like a real fly for the public, so a compromise came about-the divided wing. Less hackle and wings-almost back to the first flies.

(Continued on page 20)

STILL TRYING TO HOOK MAINE'S TOUGHEST TROUT

Back in 1938, word got around among Maine fishermen that there was a gigantic brook trout, weighing 10 pounds or more, holding forth in the Pennamaquan, a stream near Calais, and defying all attempts to hook it.

Five years have passed, and the fish—called "old iron jaw"—is still defiantly splashing around the Pennamaquan. Hundreds of fishermen have tried to catch it. Scores of other anglers thought they had him, but he has always broken away.

Today the big fish is almost a legend. Dozens of stories are told of the rods he has snapped and the lines he has broken. Those who have spotted him in shallow water report that both sides of his mouth are lined with hooks—grim symbols of his battles with sportsmen.

For a long time this Spring, no one reported seeing "old iron jaw," and rod and reel men were beginning to wonder if the great trout of the Pennamaquan had died a natural death. No one knows even the approximate age of this finny scrapper.

Recently, Mrs. Adeline Smith, who lives near the site of the old Sprague dam on the Pennamaquan, reported seeing "old iron jaw" slithering in close to the bank. She got a look at him and said that he was toting around more hooks than ever.

For years the Pennamaquan which rises in a cold spring on the Charlotte road a short distance from Calais and empties into Lake Pennamaquan, has been recognized as one of the finest trout streams in Maine. Every year, for decades, speckled beauties weighing from four to five pounds have been taken from its deep black pools.

According to Warden Cook of Bowdoinham, "old iron jaw" is of the common species taken from the stream except that he apparently weighs in at twice the usual size. Evidently he is a survivor of some old stock.

The person who finally catches this game trout—if he is ever caught—not only will have a prize fish, but one of the finest collections of hooks and flies in all of Maine.—

American Weekly—Pittsburgh Sun Telegraph.

CHARLIE WETZEL'S BOOK "PRACTICAL FLY FISHING"

It has been erroneously reported that the supply of the copies of "Practical Fly Fishing" has been exhausted. They are still obtainable from the Christopher Publishing House, 1140 Columbus Avenue, Boston, Mass., at the cost of \$3.00.

The author offers this book to the public with the hope that it will meet with the approval of both the experienced angler, and the novice, who may be trying to catch trout the gentlemanly way—on a fly. The book is divided into three parts, Fish and Fishing, The Fly Fisher's Entomology, and Tying Flies.

Part 1 deals with trout and bass, and how to catch them on wet flies, dry flies, nymphs, and bucktails. The elements of fly casting, including roll, curved and long distance casts are treated in a simple manner, and the tyro is gradually led into:

Part II which tells how the flies and insects that concern the fly fisher, live and behave; where they are found; what they look like; how to identify them; together with descriptions and illustrations drawn to scale, of some fifty natural flies and nymphs, and the dressings of their corresponding imitations.

Part III explains in detail and with clear cut line drawings, how to fashion these artificials; and with this information, the reader should have no difficulty in imitating and matching any of the nymphs and flies, found in and along the water.

Alex P. Sweigart, Editor of Pennsylvania Angler, writes in the Foreword: "It is with extreme pleasure that I write this foreword. This pleasure is not alone prompted by the deep friendship that I feel for the author as comrade-sportsman of many happy days astream; rather it is through the realization that a practical fisherman is passing on to you, the trout fisherman of America, an intensely needed treatise on ways in which you may better your sport with the fly."

BACK THE ATTACK BUY WAR BONDS



Bear Creek in Schuylkill County robed in its winter garb.

THE JACK MINER BIRD SANCTUARY

It is unthinkable that the internationally famous Jack Miner Bird Sanctuary at Kingsville, Ontario, should ever be allowed to lapse in its unique service, when Jack Miner comes to the end of his long and markedly useful life. Fortunately, the Jack Miner Migratory Bird Foundation Incorporated, has planned soundly against any such disaster. A trust fund is being built up of gifts and bequests, with the objective of perpetuating Mr. Miner's home and sanctuary in its entirety, together with ambitious developments in the interests of new generations of Canadians and Americans and visitors from abroad.

In addition to a strictly trust fund of \$1,-000,000, the Foundation-like the 80-yearold patriarch whose vision and energy and love of living things have been the fount of the great educational project-aims at another \$250,000 with which to purchase outright the 1,600 acres of Jack Miner Bird Sanctuary not now owned by him, in order that the whole 2,000-acre area of the sanctuary may be secure for all time. At present, only 400 acres are actually the property of Jack Miner and the Foundation. The goal is a public institution—an international park, with clubhouses for Boy Scouts and Girl Guides and a community church. Mr. Miner's bequest of all the property of the sanctuary belonging to him is an inspiration that should stir the generous impulses of thousands of people who recognize the educational value of the project.

It is like painting the lily to heap praise upon the world-wide plaudits that have been sounded to the honor of Jack Miner. Last June the King conferred upon him the Order of the British Empire. Her Royal Highness the Princess Juliana of The Netherlands has declared that: "The work done by Jack Miner is of the utmost value to scientists the world over, and deserves all the recognition it receives now and for all time." The noted U. S. writer Mr. Irvin S. Cobb spoke of the revered man as "the greatest practical naturalists on the planet." And public and press, over the years, have praised warmly this remarkable Canadian and Christian gentleman. His work must—and will—live after him, unless the people on both sides of the international border pass up the privilege embodied in the simple appeal: "When making your will, remember the Jack Miner Migratory Bird Foundation." -Stratford Beacon-Herald.

GREAT OUTDOORS

By HARRIS BRETH

Every trout fisherman has his favorites. He likes to fish one creek far more than he cares to fish on dozens of others, although the stream of his choice may be overshadowed in many ways by many that he has visited. Perhaps some day in the distant past he was lucky enough to hit a certain creek and when the day was over found himself burdened with the finest catch he ever experienced. Or it may have been that in some sheltered pool he had the good fortune to snare an old grand-daddy of the speckled tribe, and since then he has never

(Continued on page 19)

PENNSYLVANIA STREAM MAP

Johnny Mock, one of the Pennsylvania outdoor writers, has announced the publication of a new stream map for the convenience of the anglers of the State. In compiling his data he had as a guide various maps and the assistance of the fish wardens. The result is an accurate piece of work. It is printed on heavy weather-proof paper and is folded to fit a pocket of a fishing vest or hunting coat. The size is approximately 2 feet by 15 inches.

It can be secured from sporting goods dealers or direct from John G. Mock of the Pittsburgh Press for the price of fifty cents.

Old Fish Hatchery Near City Was Among First in Section

All that remains of what probably was one of the earliest fish hatcheries in Pennsylvania may be seen in the bed of a small stream on the watershed of the Williamsport Water Company in Mosquito Valley.

It is edged with mountain stone, whose straight sides are laid to form the perpendicular walls of the main channel and the narrower side channels leading into it.

The fish hatchery probably was built about 1850. Mrs. Albert Decker, of 2323 Riverside Drive, South Williamsport, supplied the most detailed information. Her personal knowledge, combined with her remembrance of stories about the hatchery heard in the home of her husband's parents, give a fairly accurate account of the construction and use of the hatchery.

Built by Remingtons

Many years ago, a family by the name of Remington came from England and settled in Mosquito Valley. They built one of the first saw mills in the valley, whose motive power was a large stone water wheel. Their first home was a log cabin. Later they built a much larger stone house, and still later the son of the original owner built a beautiful home on the original location and used it as a summer home.

The hatchery was built by the first Mr. Remington. It is probable that the design was copied from some that he had seen in England, because the first fish hatchery built by officials in Pennsylvania was constructed about 1875.

The plan of construction of the Remington hatchery was a main channel, with smaller flumes leading off at right angles from it. Metal screens of different size mesh were installed at the entrance of the flumes and at other intervals. These screens permitted the small fish to escape from the larger fish, which would have eaten them. Thus the small fish had a chance to grow.

Sold Hatchery and Land

Two sons of the original Mr. Remington, Edward and Robert, left home and started an advertising business in New York and Pittsburgh. Later Edward returned and built a home. He sold the land on which the hatchery is located to a man named Jones, who operated it for his own interest and pleasure for a number of years.

The Remington land, and later the Jones land, was sold to the water company, although Edward Remington leased about 40 acres for the summer home he built and lived in until the time of his death.

FIELD AND STREAM

By R. E. ANGST

"Spoil banks" can be made things of beauty. Sportsmen in the eastern counties of Ohio, bordering on Pennsylvania, are rejoicing over the recent formation of the Ohio Reclamation Committee, an organization whose efforts are being directed towards reclaiming the "spoil banks" resulting from the process of open-cut or strip-mining for coal.

Mining for various minerals, in many states, has been conducted by the strip mining process, whereby the overburden of top soil is removed and laid aside until the seam of coal or other minerals, is exposed. After the minerals are removed from the cut, nothing remains but barren piles of earth called in Ohio "spoil banks."

Formerly these excavations and the resultant eye-sore were permitted to grow up in weeds and scrubby thickets, where anything grew, of no value to human or animal life.

To date, the organized sportsmen of eastern Ohio have nothing but praise for the excellent work of reclamation and reforestation being done out there. Four hundred thousand trees were planted within the past year.

The program, as inaugurated, as well as the saving of the water table by creation of lakes, is the first undertaking of its kind ever attempted by private industry in Ohio. And if they can do it out there they can do it in Pennsylvania. In many instances, the same companies have holding in Pennsylvania where strip-mining operations are being conducted. The same opportunity is within the reach of Pennsylvania sportsmen and we have a champion for the cause in the person of State Senator Harold Watkins of Frackville, who sponsored a bill along these lines in the past session of the legislature.—Pottsville Journal.

TAKE YOUR RIFLE FISHING

Water snakes are known to destroy a great many fine trout every summer season in Monroe County. The reptiles, too, seem to go after large, fine fish, which probably, is only natural, as the larger the trout, the greater the fish dinner.

However, fishermen do not like this kind of competition and the state does not stock streams with fine fish in order to keep the water snakes alive.

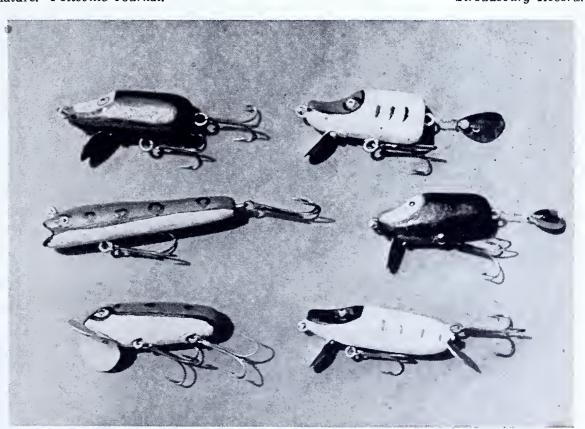
One fisherman, who was observed fishing a Monroe stream just a few days before the trout season ended, had, in addition to his fishing rod and creel, his trusty .22 rifle. Moreover, when encountered by another follower of Izaak Walton, he had two big water snakes that he had shot. Commenting on the destruction done by the snakes, the fisherman-hunter cut the reptiles open with a hunting knife and the stomach of one was found to contain a trout about ten inches long and of good weight. The other snake's stomach contained a good size trout, although smaller than ten inches.

Two well known sportsmen from the twin boroughs went out along one of the Monroe creeks and found many trout caught in pools in the diminishing West End stream, in which the water was very low, due to the drought. In a couple of pools, they found snakes right in with the trout and prepared to enjoy many a fish dinner. The sportsmen killed the snakes and removed the trout to another branch of the run, where the stream is still high.

Fishermen state that the average water snake may be expected to destroy at least one trout a week, and that it is quite likely that the average may be as high as five trout per snake per month. As the number of snakes is large, this means considerable loss to the sport of fishing.

It is, therefore, suggested that a fisherman take his rifle along when he goes fishing and when he sees a water snake, show no mercy.

—Stroudsburg Record.



Brownie Sherman of Williamsburg made these plugs with a knife and finished them with sandpaper and enamel. The brass spinners are also homemade. Each one has caught bass and walleyes for him.

A LIVE BAIT CONTAINER

By CHARLES E. BIDDLECOMBE

WITH all due respects to the artificial bait fishermen, and with full knowledge of the lessons in conservation he teaches us: there comes a time, or place, where we wish to fish with live bait, whether it be minnows, cray fish, lamprey eels, or any of the many water born fish foods. I leave myself wide open when I say, and can prove the statement that there are waters in our state where the artificials are practically useless, for example, some deep sections of the upper Delaware River. I might regret ever making this statement, being aware of the faith some of the good fishermen here have in the artificials; never-theless, some of us use live bait exclusively, and there has been occasions I must admit when we have not used sound judgment regarding the amount of bait we have tried to keep alive at one particular time. Our state has set a very high daily limit of bait-fish and fish-bait, and how many times can you recall in your entire fishing experiences you were forced to stop fishing, due to your supply of bait being depleted? On the other hand, try to recall to memory the instances when we had our limit of minnows and other fish-bait in our buckets, and several died, and were discarded, solely because we had taken more than we could reasonably hope to keep alive. Can you truthfully say your supply of bait was depleted more oftener than the times you discarded dead or dying fish food, due to an

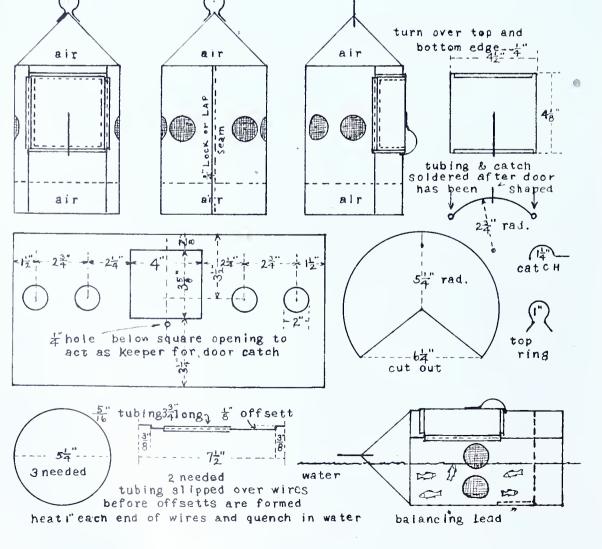
over crowded bait bucket? I believe you will agree with me when I say we take entirely too many minnows and other bait from our streams. A year or so ago I stated in an article that the damage to our fishes did not entirely end when we removed from the waters the different foods we classed as bait. The breeding and hatching and hiding places we disturbed, and often destroyed while seeking our bait was more detrimental to the fishes' cycle of existence than the actual removal of the bait we selected. Do not tell me you are not particular as to size or species of bait you select. For instance, when you are netting hellgrammites, what do you do with the small hellgrammites and cray fish and the different larvae which collects in your net? Do you carefully replace them where they are safe and protected until they have a chance to develop into something akin to a fishes meal? Sure we do: (in a pig's eye.) I am speaking from experience, and would hate to see in one pile all the fish forage that I heedlessly killed in my lifetime while hunting bait. This is not a very pleasant recollection, never-the-less, we heedlessly create great havoc among the fish forage every time we collect our bait, regardless of the care we exercise. To offset this damage to a certain extent, let us resolve to use care and consideration towards the small insect life and crustaceans, and minnows which make it possible our game fish

survive and multiply. It is cheap insurance towards our future pleasure if we compete with one another in exercising conservation measures concerning the different fish forages in our streams. We should each one of us, resent any act of wilful destruction or waste of any of our natural fish foods. Due to the fact most of our fishermen are now in foreign lands, it is the duty of us who remain here to care for the streams and lakes against the day when these fishermen return. If we each contribute a share in conserving the natural conditions of the streams and all that they sustain, we will likewise share each pleasant experience these returned men will enjoy: knowing we had a part in preserving the fundamentals of their enjoyment. We should each double our vigilance regarding polution in any of its ugly forms, and wage relentless war on all animals and birds preying on the fish in our streams.

Whenever possible next Spring, you and your fishing partner donate an entire Sunday to cutting and planting willow sprouts along the stream where most needed. Those unfamiliar with this procedure should contact your local fish warden, and he will go out of his way to help you, and you will, without a doubt find him to be a friend, and not at all like the person you pictured him to be. Your license fee helps to pay his salary, and he appreciates this fact, and he will come more than half way with you.

Assume a helpful attitude with the younger fishermen when necessary. Show them some of the good places to fish, and how it is done. They won't catch them all, and the man must be a calloused person who does not enjoy watching a boy with a good sized fish. The chances are ten to one he will immediately go home with his catch, entirely satisfied. Are we grown ups that conservative? During four years as a special fish warden I never found a fishing violation among the young boys. They have a creed we could all profitably adopt, and their petty misunderstandings towards some things which we resent, can be easily adjusted by explaining to them the correct way of doing it.

The sketches accompanying this article is my contribution to the conserving of our minnows and other fish foods. I have tried all shapes and sizes of minnow buckets, and I think my idea is as close to the real thing as is possible to get; although it helps the fisherman who wades much more than the bank fisherman. It cannot be beaten as a boat live bucket, due to its shape and buoyancy. It tows without resistance, and he who wades is relieved of the nuisance of the bucket after the minnow container is removed, as in the conventional minnow bucket. In my idea, the water container is nothing more than a piece of rubberized cloth, such as is used in baby's bed, or a piece of discarded raincoat, or any other piece of water resisting cloth. A piece of tightly woven duck or canvas after wetting is an ideal container, acting as the "Sahara water bottle" idea works, keeping the water



cool through evaporation. This piece of fabric, upon reaching fishing grounds is folded and placed in bottom of creel, or in coat pocket, or wherever convenient; can even have tapes sewn on two corners and thrown over back and tied around neck when a sudden thunder shower arrives.

The can is made of whatever metal available, even an old oil container, straightened out, will answer the purpose, but should be painted when finished. Thickness of metal should not exceed 24 gauge, on account of ease in forming and cutting. The openings on opposite side from door are covered with ordinary galvanized or bronze door screening which can be obtained most anywhere. The ring at top, used as a handle, and also the wires that the door slides on should be bronze or brass, 1/8" or 3/16" round. Most any welding shop will sell a piece of brazing rod suitable for the purpose. Exceptional care should be exercised in making all soldered seams, as most of them must be air tight. When soldering acids are used be sure to wash seams with fresh water to avoid corrosion.

To balance can, and establish its sub-merged depth, and counter balance weight of door, and to keep door always on top when floating in water, take a large lead sinker, and hammer it to shape to fit on inside of minnow compartment opposite side from door. Size of sinker will depend on weight of metal used in can, but one of from two to four ounces will do. Place finished can in tub of water and lead sinker inside of can. Move lead from end to end to establish position where it balances can. Scrape lead bright and solder to bottom of can (on inside). Care should be taken that no sharp corners are left on lead to injure minnows. With slight effort and ingenuity you will devise novel ways of balancing can, but lead must be heavy enough to always force door to top when in use. Guides on each side of door can be made from short pieces of gasoline tubing taken from an old jalopy. Force wire that is to be used for guides through tubing and hammer straight. Clean and solder to sides of door, being careful to have everything square and true to measurements. The door catch shown is simple in construction and efficient. Most likely some readers have an idea of a much better catch than mine; if so pass your ideas along so we can all enjoy them. Bear in mind though, this catch must be both simple and easy to operate, also must hold secure under rather serious abuse. You can forget you have this bucket tied to your belt, and walk through shallow riffles, with can bouncing over stones, and the catch must stay secure, even under this rough treatment. A hinged door will answer as well as a sliding door, except, when hinged door is opened, it overbalances can, and if not careful, can will roll upside down. The sliding door eliminates this possibility. Another wrinkle I accidentally discovered was one time when I forgot my creel, and used mason cord line on can as a stringer. This wrinkle works fine, as slight resistance and weight of can will keep your trout and bass always away from your legs. When this cord is used as a stringer, fasten a small piece of stiff wire to end of cord, so fish can easily be threaded on cord.

When using this can to transport live



Bear Creek in Schuylkill County below the falls.

bait in car, spread your piece of canvas on ground, and stand can in middle of canvas, and bring corners and all ends of canvas up and around top of can, and tie the cord around canvas and point of can below ring, making certain cord is fairly secure. Hold can and canvas under water until it is full of water, and you are ready to go. Of course, the minnows must first be placed in can before canvas is secured. The water holding compartment at bottom of minnow compartment might seem small to hold your minnows and keep them fresh and lively, but it is of sufficient size to hold all the minnows you will need for a day's fishing, that is, your bait will keep fresh on the hottest day when moving from one riffle to another, providing the riffles are not too far apart. When ready to move, take hold of the ring on top of can and lift quickly, and enough water will be retained in can to insure your bait being kept alive.

This seems like a lengthy discussion, but my sole aim is to explain fully every detail, for I am sure that whoever constructs one of these live cans will never use one of another type. The conservation angle to this is, that the can, in order to be small enough to be handy and convenient, must necessarily be too small to hold a daily limit of bait; hence we save valuable fish forage, while at the same time we are able to have a sufficient amount of bait for a busy day on the stream. Another point in favor of this container is the fact that the unused bait is in excellent condition, and is returned to its natural habitat with a fair chance of surviving.

You still have several months in which to make one of these cans. Go to it, and see what improvements you can invent while in process of construction. If you hit on something worth while, don't keep it to yourself, but let us all in on it, and maybe someday on the stream you will meet a fisherman using a device of yours which is an event you will enjoy. Try it, and find out for yourself.



Mrs. Charles Rath, inveterate anglerette, catches many fine trout from Spruce Creek near her home. This great brown trout was taken on a worm on the second day of the season last year.



Fig. 1. Backhand pick up, almost in horizontal plane.

WET FLY CASTING

(Continued from page 7)

experience. Plate No. 3 shows that it can be done. This was a cast of approximately sixty-five feet, made with an eight-foot rod that weighs slightly less than four ounces. The long and short of it is this—some men learn to throw a straight line when they want to, and some never learn the trick of it. It all depends upon how well you wish to train your casting hand.

The Shoot

In wet-fly fishing, as in dry-fly fishing, the caster should learn to shoot the slack line out through the guides at the comple-

tion of the forward cast. To shorten line, prior to the pick-up, the line is stripped in through the guides and held in coils in the left hand. These coils are so held through the pick-up, pause, and forward cast. Not until final power has been applied completely to the forward cast are the coils released. Then, as the line travels forward, it will pull these coils of slack line out again with it, thus adding from ten to twenty feet to the length of the cast. Be careful not to release your hold on the slack line until full power has been applied and the line has started forward, as premature release of the slack will kill the power of the cast and cause it to fall short. Plate No. 4 shows the release of these coils of slack line at the completion of the for-



Fig. 2. What can happen if you apply too much power at the finish of the forward cast.

ward cast, with most of the first loop already gone.

For long casts, the "double shoot" is a good trick to have up your sleeve. In this case, you probably will have four or five loops of slack held in your left hand. Be sure to throw your back cast high, with plenty of power, and, as the line travels to the rear, release one or two loops of slack to shoot through the guides. Then the remainder of the slack can be shot easily on the forward cast. Care must be taken to check the shoot before the line is fully extended to the rear or loss of power and control will result. You will find that you can handle a surprising amount of slack line by using the double shoot.

The Horizontal Cast

When casting with the rod held horizontally, execute the cast, either forehand or backhand, just as you would the simple overhead casts up to the point where final power is applied to the back cast at the "one o'clock" position. Once power has been applied, allow the rod to "follow through" with the back cast as the line travels rearward. This accomplishes two results. By allowing the rod to drift back with the cast until it points almost directly to the rear (See Plate No. 5), you move it out of the way of the line as it travels back; also, you allow yourself more space for rod movement to build up the gradual acceleration of the forward cast. The horizontal cast is particularly useful for placing the fly under overhanging branches and obstructions; also, it is helpful in locations where free use of the rod in overhead casts is not practical.

Long Casts

Sometimes it is desirable to throw a much longer line than ordinarily is used in everyday fly fishing. To achieve added distance, say seventy or seventy-five feet, with a trout rod, the high back cast is a necessity, as it permits direct application of power. The mechanics of adding distance to your cast are as follows. First cast out on the water before you as much line as you can pick up with decision. Then strip off ten or fifteen feet of additional line from the reel and hold the coils in the left hand. Now, pick up the line you have already cast out in front of you and toss it into the high back cast, following through with the left hand and the entire casting arm as shown in Plate No. 7. As the line travels to the rear, lower the elbow to the right side again, remembering to keep the rod tip well back in order to facilitate building up the acceleration of the forward cast. When the line has extended itself fully to the rear, push the casting hand directly out in front of you (See Plate No. 6) thus putting to work the lower rod and thereby bringing the full power of the rod into play. Then, after the line has started forward from the rod tip, and not before, release the coils of slack in the left hand and allow them to feed themselves out through the guides.

The use of the double shoot in a long cast facilitates the handling of the slack line and reduces the inevitable tangles that will occur if you attempt to shoot too many coils of slack at one time.

There is another trick that dovetails right in with the double shoot when striving for

Position of Rod at completion

of the "Follow Through"

extra distance. Some of the tournament casters call it "tearing the sheet." This is how it is done.

When you release two or three coils of slack line to slide out with the back cast, the time comes when this rearward shoot must be checked. Now-as the last loop of slack moves out, instead of stopping the shoot while your left hand remains at your side, grasp the line between thumb and forefinger and let left hand ride back with the line as far as you can reach. When the rod begins its forward journey, bring the left hand sharply down and across in front of your body as far as it will go. This will start the acceleration of the line and help the rod to build up the velocity of the forward cast, thereby adding power to the cast. It is important that the movements of hand, rod and arm blend into one smooth motion to insure best results.

There are several things to keep in mind when you are making long casts. First, you must aim the cast high so that it will have ample time to travel forward before touching the water. Most of the power should be applied with the lower and middle rod. Thus, care must be taken not to throw the tip in too strongly at the finish. Too much "throwing in" of the tip in a long cast tends to apply the power too late



Fig. 3. Throwing a straight line.

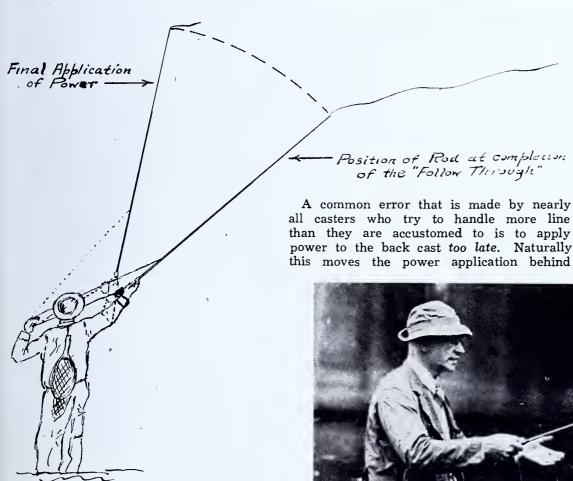


Fig. 7. Extend the casting arm when making a long cast.

which is apt to cause the fly to come through low and foul the line, thereby producing a "bird's nest" of heartbreaking proportions. The "full lift" of the back cast (throwing the line high and following through with the outstretched arm) the lowering of the elbow, and the forward push of the casting hand to apply full power-all of these motions must be done smoothly, one blending into the other, without break or change of pace.

and below the "one o'clock" position, rendering the high back cast an impossibility. To avoid making this all-too-common mistake when making a long cast, be sure that the rearward acceleration of the pickup is begun with the rod held horizontally before you, arm fully extended to the fore. In other words, reach out as far as you can to begin the pick-up, having the line "tight" as you do so. In this way the line velocity can be built up to the point where full power can be applied at "one o'clock." To achieve this very thing, Marvin Hedge, one-time world champion distance caster, reverses the position of his feet, placing the right foot forward on the casting platform. (Continued on next page.)

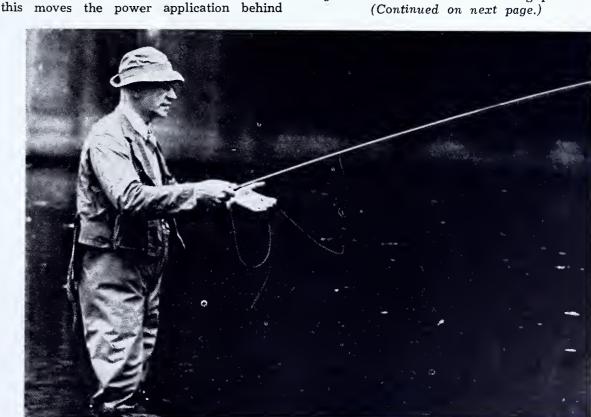


Fig. 4. The shoot from coils held in the free hand

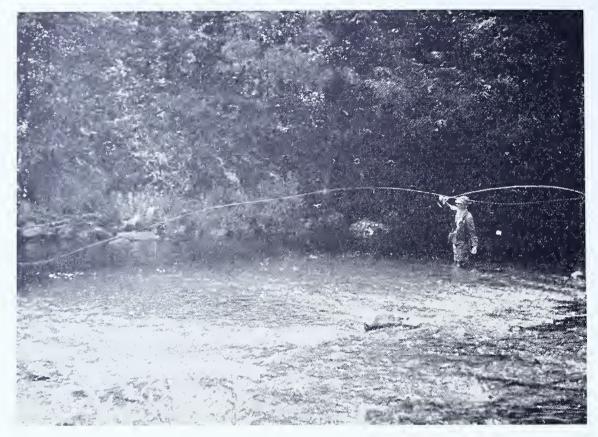


Fig. 5. Good example of the "follow through" in a horizontal backhand cast.

Timing

Of course, another primary requisite to successful long casts is that the timing of the cast be correctly estimated. Faulty timing can ruin a long cast completely. If you wait too long in the back cast, the line completes its rearward journey and permits tension against the rod tip to relax. If you do not wait long enough, then the line will not have extended itself fully and power can be applied only to that portion which is actually pulling against the rod tip. You must find the happy medium and begin the forward cast at just the right instant, otherwise power will be lost and the cast will not come off.

One of the advantages of watching the high back cast straighten itself is that it permits you to check the timing of your cast. By watching the line unroll itself to the rear, you learn not only where it goes but also how long it takes for it to get, there. If you make it a point to watch your back cast now and then, unconsciously you are bound to absorb timing until it becomes automatic. This sixth sense of casting is invaluable if you wish to become a good caster. If, later on, you find that you are having trouble making your casts behave as they should, watch your back cast and check up on your timing. This usually will give you the answer.

(To be continued)

TOUGH STREAMS

(Continued from page 9)

And at the end of the day the angler will have a feeling of satisfaction over the fact that he was able to enjoy his sport to the fullest without killing. A man who cannot experience that feeling will not be interested in out-of-the-way streams, for usually they contain comparatively few fish of a size worth creeling.

No special tackle is required, obviously, although the angler will find that unusual skill in handling his tackle is necessary under the different conditions which he is sure to encounter.

And, finally, the angler will have to school himself to endure disappointment—for it is an undeniable fact that often his efforts will be unrewarded—and he must cultivate patience in the realization that one good stream makes up for a lot of fruitless prospecting.

A couple of years ago a friend and I, en route home from a trouting trip, stopped at a farm house along a back road to get a drink of water. The farm lad who offered us a tin dipper looked over our trout with a critical eye and then informed us that he could catch bigger fish than that from an old beaver pond back in the mountains.

He told us how to reach the pond, by driving over a back road to a certain country school house, where we could find a road leading back through the hills to the spot.

Some weeks later we decided to make the trip. Fortunately we rode in an old model of car, with body well off the ground, for the trip down the mountain road was a real experience. The oil pan scraped bottom half a dozen times, and frequently I had to climb out and hold tree branches out of the way until the car passed. The end of the road brought us to a high embankment overlooking the pond.

The water was black and of considerable extent, with the dead trunks of trees standing up all through it. Below us a small mountain stream flowed into the pond, and half submerged in the water at the mouth of the brook was a weather-beaten rowboat.

It was not a likely place for fly casting, and we decided to make use of a few worms we had carried with us.

The first cast brought a sunfish all of five inches long!

It was almost black in color and cold as ice.

We continued fishing, and the sunfish continued to bite. We ran out of worms and caught them on bare hooks. We used two hooks at a time and caught two sunnies at a time. We filled the water-filled end of that old rowboat with those runt sunfish. The five-incher was the biggest one we hooked in an hour of the strangest kind of fishing either of us had ever experienced.

We had gone to the pond with a vision of big trout—we left at sundown discussing an extraordinary experience.

I never went back to the pond because I doubt that the sunfish ever became any larger. The water was so cold it made my hands ache; the bottom of the pond was covered with muck. There was no sign of minnows or other water life. How the sunnies got there, and how they ever had managed to avoid starvation, I can't explain.

It was the queerest trout fishing experience of two decades of angling—and it resulted from our curiosity in a seldom fished, unmapped pond a long way back in the hills.

Reprinted from Remington News Letter

The giraffe is the only living creature which trots and gallops at the same time. His front legs gallop and his rear legs trot. The word giraffe means "the one who moves swiftly."

The pronghorn antelope of the West is really not a true antelope at all. Horns of true antelopes are portions of the skull itself and are never shed. But the pronghorn sheds his horns and grows a new set each year. He has no traces of the rudimentary hooves which are present on the hocks of all other ruminants. Today he is the sole living representative of his genus.

The Remington Arms Company, Inc., once made a number of RAIN GUNS for grape growers in Switzerland. These growers suffered great losses from hail storms each season, and the purpose of the gun was to break up threatened hail storms and produce rain instead. The large cannon-like gun was set in a vertical position. To the muzzle was attached a cone 6 to 7 feet in height. Charges of black powder were used. The cone caused the forming of smoke rings, which, of course, grew larger as the charge went into the sky. The smoke rings were supposed to create warm air which prevented the moisture from freezing into hail and produced rain.

Wildlife has many and devious ways of protecting itself. Ordinarily the sun bittern, a pretty little bird of the American tropics, which possesses a long neck and beautifully marked plumage, flies to safety when danger threatens. But when surprised and pressed too closely, he will flatten against the ground, spread his lustrous plumage around his small body, throw back his head and neck, and pretend to be a dangerous coiled snake, ready to strike. He sways his head back and forth slowly and hisses ferociously.

The frigate, or man-o'-war, bird is really a pirate. He robs other fish-eating birds of their catches.

It Takes Two Rods

(Continued from page 2)

ing Fortress, during which he downed three enemy fighter planes and drove off six others, Lieutenant Hector Carruthers—." I looked at the Colonel in wordless astonishment.

"Harrumph!" said the Colonel, flushing a little and looking over my head. "I married his mother two months afterward. How about a drink? I want to tell you how Hector won the Distinguished Flying Cross."

I guess that was when I first really understood that it takes two fishing rods to make a good man out of a bad boy.

Editor's Note—This is the first of a series of articles from the talented pen of Alfred Miller, a great and inveterate Eastern angler.

AMERICAN FLY TYPES

(Continued from page 5)

team for a long time to come, Pete had never used one.

The day was sultry, strikes so few that it appeared futile if not foolhardy to continue. Strangely I had strongest beliefs that the Midget would turn the day into one of action, if not one or two good trout in the creel for each of us.

Pete and I sojourned to a particularly long flat emanating from a wide riffle. This one stretch of water has yielded trout for many years, and is one which we frequent religiously from the opening days until the warden chases us out in last minutes of July. The trout which claim permanent residence in this section are, collectively, average well fed fish, but with the near appearance of being native. Too, there are fabulous monsters; the kind which one will see once in a season, may hook for a fleeting second, but never hang on the proverbial walnut plank over the end table. This canal like water has been the proving grounds for most of our feathered creations, thus in commonplace mutuality, we used it as the test for the Midget. While I had been well educated to its abilities, it was to be Pete's first experience with the Midget.

He waded into the lower portion of the flat, casting line as if the result would hardly vindicate the effort. Pete is a master with the limber rod and his cast went far upstream, flowing slowly and drifting toward the surface of the slick with impeccable beauty. Then he permitted the lure and leader to sink, meanwhile letting the cast gain momentum with the current and swing out gracefully.

He looked at me and I shook my head in negation. The float continued, stretched beyond him, then began to reach directly downstream. Again he glanced over his shoulder, and again I motioned to rest the cast further.

This is difficult to the average angler, and especially to one well versed in the habits acquired from years of switching a cast of flies. Still, Pete remained quiet and waited for the lure to be in direct line with his rod tip.

Then with a slow retrieve, the lure was put into erratic action. Pete turned to say

something, but no sound was emitted, because for the next few minutes he was busy with a plump ten inch brown trout who did not like the taste of the Midget.

For the remainder of the afternoon we alternated and enjoyed two or three trout an hour. Then the unexpected but ever hoped-for occurred. Pete sunk the barb into a trout of which little said the better. His hands trembled when he fumbled with his cigarettes, and he muttered an incoherent mixture which I could hardly record.

The trout is still there because I have seen no reports in the ANGLER relating the conquest of a monster brown trout with a hooked jaw.

Technically this lure belongs in the "impressionistic" group of which so many of our successful artificials are representative. How it appears when in action is far more important than its appearance in the actual sense.

Its construction is not difficult if one has the proper materials and especially the correct hook. These, in order, are listed as follows:

Hook: light weight, 4X long No. 12

Body: (quill of the Condor, or the enamel quill stripped from a medium dark turkey wing feather); (marten fur or fox belly fur).

Note: These are used together to obtain the segmented and whiskery appearance common to nymphs.

Legs: Guinea and partridge. Both are attainable, but partridge makes a superior material for this purpose.

Tail: partridge.

Bucktail: natural light brown.

Note: Some tails have mottled markings and these are superb. Likewise Caribou for the same reason.

Wing pads: Jungle cock. Extremely effective.

The work is begun much the same as when building a wet fly. Fasten three sprigs partridge hackle at the rear of the hook then secure both the end of the quill and the thread on which the marten fur has been prepared (dubbing). Wrap the marten fur on the shank, but loosely so that it will be flexible enough to extend beyond the segments of the quill. Next, follow with the quill, leaving a space equal to

almost one half the width of the quill itself between the segments. Secure with the working silk about one-third the shank length from the eye of the hook. Fasten in six whisks of partridge hackle in such manner that they extend to right and left. Incline these slightly to the rear with one or two turns of the working silk. Fasten in no more than eight or ten whisks of bucktail and project them to the rear, using care that they do not bunch too closely together. Over this, secure two jungle cock eyes but on top, not on the sides, as when dressing fancy streamers and salmon flies. Secure the marten fur immediately in front of the jungle cock eyes, after twin sprigs of partridge hackle have been extended to the front beyond the eye of the hook. Take two or three compact turns with the marten fur until a neat head is formed. Whip the working silk, then fluff out slightly the fur head. Finish with cement, and your first Midget will be complete.

The print will assist in forming the Midget, and if you keep in mind that sparseness is by all means essential, your finished lure should be correctly dressed.

It is a far cry from fishing these days. Unfortunately the Marine Corps does not include several hours per day the tutoring in the art and craft of "flymanship." But every time I end up in Harrisburg I get in touch with Charley Fox and we hash over the prospects of a post war America, with emphasis on the angling, of course. Pretty pictures evolve, no less.

But isn't that the advantage of being an American.

GREAT OUTDOORS

(Continued from page 12)

failed to return at odd times and various occasions. When he arrives at the old pool, he likes to linger and live again the great moments of that episode. It seems to matter little whether this favorite stream is spurned by other anglers, "he" doesn't care, it's the one spot he wants to fish.

It's the same with a choice of fishing rods. He may have only one, but that one rod is his pride and joy, he thinks he can take trout easier and more of them with it than (Continued on page 20)

W ITH a total of approximately 1,411,000 takable trout placed in the streams of the State, the Pennsylvania Board of Fish Commissioners bring to a close its 1943 stocking program. Coupled with impaired transportation facilities and the Board's pledge to keep faith with the boys at war, approximately 380,000 fine trout that would have also been stocked in 1943, are being held over at the hatcheries.

By holding these fish the Board will materially reduce its truck mileage which is highly important. Having suffered a heavy loss in transportation facilities when twelve tank trucks were completely worn out in 1943, the Commission's fleet has been reduced to some thirty trucks, many of which have already covered more than 75,000 miles. The Board feels that by conserving its equipment now, it will be better able and prepared for the big stocking program scheduled to begin early next Spring. It is believed that the reduced public fishing during 1943 has left a sufficient surplus of fish in the streams as the streams will support throughout the remaining winter months and the reserves being held at the fish farms will more than compensate mid winter stocking.

The 380,000 trout, all takable fine fish held out of the 1943 program are going into the Commission's "Reserve Duffle Bag." The Board has made a promise to do its level best in helping welcome the return of our boys and until they return, this reserve will increase. When the emergency is past and the army of fishermen again return to the streams, the surplus now being built up will provide ample supplies to meet the demand.

Barring unforseen difficulties, the spring and mid-season stocking programs scheduled for 1944 should be the heaviest in the history of the Board and the loss of many fine trout in ice-locked streams will be avoided.

Fishin' For Fun With Wets and Streamers

(Continued from page 3)

fast water you will therefore speed up this hand action some and in pools or slow water it will be necessary to speed up the method of hand turning considerably, but you alone must be the judge of what action the lure needs to imitate a minnow in each stretch of water you fish. By this hand turning method, you can really make the lure work naturally, and your streamer will not be made to skip or hop, which is not a natural movement.

Another method is to simply make the rod tip do the work by casting across, and working the streamer around into shallow water by frequent short sharp jerks. This method will also get trout but not by the same degree of regularity as the first method explained.

In pools or very slow water you can imitate a foraging minnow or an injured minnow by casting across or upstream a little and allowing the streamer to sink deep or even to the bottom if necessary and when you figure it is deep enough, give it a slight jerk and allow it to settle again and so on. This will often tempt a big bottom feeder.

Yet another method is to "skitter" the streamer by casting across and retrieving the lure by the quickest possible method making it "skitter" across the surface. This method produces more fun than fish, as you will get many bites and few fish. Why they bite by this method or what they think it is I do not know and sometimes I think they are just mad and tail slap it.

It has been my experience that brooks and rainbows are partial to streamers with silver or silver ribbed bodies, and that browns are more partial to gold or gold ribbed bodies. I have had days when such a rule was not authentic, however, but in most cases I have found those certain partialities true in colors, relative to the varieties mentioned.

Do not call it a day on the stream without trying a streamer.

There's fun to be had in streamer fishing and most of us are just "Fishin' Fer Fun" anyway—Eh?

GREAT OUTDOORS

(Continued from page 19)

any other. He may be able to afford two or four or more, but one in his collection is the battered old favorite. Let the experts tell him that his 9-foot, 6-ounce, heavy split bamboo is not the thing for the kind of small, narrow streams he generally fishes, and he may be talked into a light, whippy, 4-ounce, 7-footer, but catch him on a trip by himself, and 5 will get you 10 he is laboring with the 9-footer. And probably taking trout!

19c

Favorite lures are something else. Starting with angleworms, minnows, grasshoppers, crickets, and continuing through nymphs, wet flies, dry flies and streamers—and some others thrown in to boot—it will take a wiser and more practical angler than most of us to select and use with confidence the particular lure for the particular occasion on the creek. One of the most successful trouters I know has the skill and experience to use, and does use, most live and artificial lures to perfection, and he takes fish consistently.

(Continued on page 22)

FREELAND SPORTSMEN ELECT

The newly elected officers of the Freeland Game and Fish Conservation Association for the ensuing year are: Lonis Ravina, Pres.; Cal Echrot, Vice-Pres.; George W. Wilson, Sec.; and Howard Lentz, Treas.

The Lieutenant Sheds His Wings

(Continued from page 11)

Yet with a decided improvement for casting because these flies were less apt to spin. And the divided wings looked more transparent. They gained in favor.

"Then a sudden change came. The fanwing. Much harder to cast but beautiful to look at when it landed upright and floated bobbingly down a current. It met instant popularity because of its looks—and its effectiveness.

"At the same time, the spider fly came into use. Few but long hackles, with no wings—even without a tail. Two extremes and each very effective. The reason is simple, they represent two kinds of insect life. And, evidently, as trout see them. When used at the proper time, on the right types of waters and cast and handled intelligently, they are killers.

"That brings us almost up to date. For the last couple of years, I have been experimenting with a different thought. We need an effective small fly to go in between the fanwing and the spider. Flies tied on too small a hook are hard to see on the waters and, in many cases, are too easily pulled out of a fish's mouth—they won't hold. And they are too hard to tie.

"So the logical step was to put less on a larger hook. In that way, a No. 12 hook was used to tie a 14 size fly and a 14 hook to tie a 16 size fly. In a way, that helped, but not enough, the body was too large for the hackle and wings. As a result, the fly was not a high, light rider on the water and it sank too easily.

"A couple of seasons ago I got a hunch and tried it out. These flies are the result. Wings on small insects are so tiny and transparent, a trout never sees them. The only reason split wings are put on a dry fly is to please the fisherman. Otherwise, they are useless. Only when imitating a heavy-winged fly are wings needed. For that purpose, the fanwing or spent wing are most effective. So—I have eliminted the split wing.

"What's the result? I can make the body on my flies much smaller because there is less tied on the hook. Also, I can use longer hackles and still have a smaller looking fly. Yet the fly will ride higher and longer. It makes no difference which way it lands on the water, it will still look the same to the trout. And that, my dear Watson, is what matters."

"But, Lieut, they don't look like a finished fly. Nobody would buy such a pattern. And I doubt if they will take trout."

"I hope most fly-fishermen will agree with you, Doc. I don't want them to become popular. But just between ourselves, Old Boy—during the last two years I've had my greatest catches right on those flies. I've tried them against split winged flies and you can have the split wing—I'll take these. I've shed those wings for keeps."

"Does that mean you give up that pet fanwing of yours?"

"Not by a jugful. Only, when I want to use a winged fly, I want it to represent wings that trout can see to make them think a moth or butterfly or large-winged fly is on the water. For that, give me the fanwing and spent wing flies. They don't have to be small and the body should be thicker where the wings are tied on.

"But for tiny flies with slender bodies, give me a size 12, 14 or 16 hook, tied without anything but a few wisps for the tail, a slender body of quill or thin material, and two hackles wound only a few turns each. Take a look at these—see how light as a thistle-down they are?"

Doc nodded his agreement. The flies were so light he couldn't feel them on his palm and a breath would blow them away.

"Now let me show you something you've never seen before. Lieut threw back the covers, stuck his bare feet into his slipper's and led the way into the bathroom.

Doc never thought to stop him. A half hour earlier, he would have called Lieut crazy for even wanting to get out of bed. It didn't even occur to him to be surprised when he found the bathtub full of water, with a mirror in the bottom, tilted at an angle.

Lieut dropped some flies on the water. "There you are, Doc, take a look in the mirror. That comes pretty close to being the way flies appear to a trout."

Down in the mirror Doc saw the under surface of the water. Little dimples on it showed where the hackles rested on the water, like the feet of tiny insects. Against the light above the surface, a faint silhouette of the body could be seen. No particular color but just a tone. The whole gave an impression of a mosquito or similar insect.

"Now, look at these." Lieut dropped a fanwing and a spentwing fly on the water. In the mirror, Doc saw what surely could have been a juicy moth and a long, slender winged fly.

"See what I mean?" Lieut was eager in his questions.

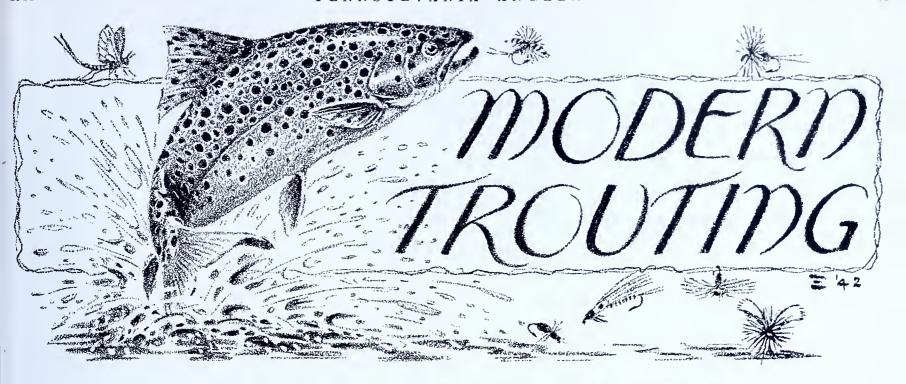
"Well, I'll be darned!" Doc moved the flies around and looked some more. "Where in the devil did you get this mirror idea? Why haven't you told me about this before?"

Lieut laughed. He always felt better when he had Doc mystified. "I'm a lot like you, Doc. I don't commit myself until I'm sure my diagnosis is right. Professional ethics, or something like that."

"You say you have been using those flies and they are all you think they are?"

"You bet—and even more. Why—I can tie two flies to one—and get better results. From now on, I've shed my wings on all the regular flies. You take the flies that please your eyes—I'll take the ones that please the trout."

(EDITOR'S NOTE—The author has experimented with these wingless flies and reports that he has had unusually good success with them. Except for the fanwing and spentwing, they are the only dry flies he will use this year, in order to prove their value. We would be interested to hear how others make out with them.)



COFFEE BEAN JAP BEETLES

By CHARLES K. FOX

JAP BEETLES have moved into some sections of Pennsylvania and unfortunately they appear to be permanently established. In spite of the damage this pest inflicts on foliage it serves one worthy purpose. It provides food for certain: fish, birds and animals.

There are times when trout and bass feed ravenously on them. Sometimes bass caught in the south eastern part of the State have dozens of them in their stomachs. Trout take them too, however we have never seen the stomach of a trout literally loaded with them as is often the case with bass.

It is probably difficult for one who has never been in the beetle country to visualize just how many actually exist. Down along the Susquehanna it might be said that it is lousy with them. When one walks through the weeds along the river many spent and dying beetles rattle down to the ground like falling berries, and others take wing. Probably a thousand can be seen in a period of five minutes.

The Japs are poor fliers. Early in the morning when they first stir about they seem to be stiff and not accurate in flight. Many drop into the broad river. Sometimes hundreds of them can be seen clinging to the brush piles and many hang on to the

protruding rocks.

The bass rise to them freely, particularly for an hour or two after daylight when they are most readily available. These rises are slow and deliberate. Large bass make no more commotion or no larger dimple than an eight inch fall fish. Furthermore the largest bass turn on them just as freely as those a foot in length.

A similar condition exists on the trout streams, however this is on a smaller scale, because fewer beetles find their way into the smaller streams. Apparently many drop when in flight and they do not seem to be able to fly very far.

One of the favorite foods of this beetle is the leaf of the willow. There are places

where willows shade trout waters. spent and dying beetles drop from the trees and of course some fall into the water and are within striking distance of trout.

The emerging of the beetle is around June 10th and there are some about as late as early September.

Fishermen try to take advantage of all the opportunities nature offers. There are some who are continuously trying to capitalize on this foreign intruder. We have tried the natural as well as: small brown hackle dry flies, hair and cork bugs, and bugs made from coffee beans. The latter have been the most effective and most interesting.

A coffee bean is very much like a Jap Beetle in appearance; the size is right; the color is right, and the two float about the same. The best way to make a good imitation seems to be to attach a bean to an old dry fly, size 14 or 16.

Make a groove in the flat side of the bean with a small file. Cut the wings and the hackles from the top of the fly, then cement the body of the fly into the groove with Duco cement or some similar adhesive. Old wet flies might work just as well but we have never tried them.

The bean is buoyant and the hackles and tail have nothing to do with its floating qualities. False casting to dry the fly is unnecessary.

One would believe that the proper way in which to fish these flies would be with a natural float down current and this is an effective method. Strange to say, however, trout also take them when they are dragging cross current below the caster.

One day last July I planned to fish for trout at a spot under some overhanging willows on a section of the Yellow Breeches Creek. There were some beetles on the willows. I threw several handfuls on the water. A trout some twenty feet below the tree came to the surface and took two of them, I worked my way below this fish in

preparation to floating a coffee bean bug over it. The trout took the bean in a businesslike manner on the second float.

It would naturally be expected that a striking or a hooked fish would invariably separate the bean from the dry fly. So far I have not experienced this trouble but it will probably occur on occasion. A large strong jawed trout which requires five minutes or more to land will undoubtedly be much harder on a bug than a small fish. It has not been my good fortune to hook a large one on the coffee bean.

To date experiments with this improvised bug have been limited. One evening last year I caught two trout and one fall fish on the bean and everything stayed intact. On another occasion I caught two trout and missed two others and again the same coffee bean stuck with the fly. In all I have seen about twenty trout caught on the bean. Approximately seven took the bug when it was fished across and quartering upstream; the remainder were on the natural float.

Probably dry flies with fur or wool bodies will adhere more securely to the bean than those with quill bodies, but this may not be the case.

When the bean is cast on the water it does not light like a dry fly but it makes a small splash. This may or may not be a disadvantage. Furthermore the bug is not as pleasant to handle as a fly because of its weight and air resistance, but it is nicer to handle than a bass bug or large wet fly.

Just what the coffee bean dry fly combination will do with bass is a question to be answered later as far as this correspondent is concerned, but we will be very much surprised and disappointed if it is not effective in this quarter, particularly on stream smallmouths. They have proved their effectiveness on trout and as a result there will always be a few in the box for those occasions when we fish the Jap beetle country in beetle time, for either bass or trout.

FRIGHTFULLY INTERESTING SUPERFIRE HOOEY

By HERB BUMILLER

NO MATTER where you go, you will find all kinds of fishermen and fishing paraphernalia. But lo! and behold! here is something you haven't seen or heard of. Something new and cheap, too.

This new era in fishing equipment, style, and method is sweeping the country. So get out the broom. The following data is yours for the reading—that is, if you can follow it.

Jump aboard and be the first in your town to own one of these super fish-getters. But, first be sure to go down to a pond and ponder over the instructions before attempting to construct these new outfits.

New Fly Rods

For fly rod fishing, secure a ramrod—any weight, length, or shape will do. This can be gotten free if any of your friends are hunters. Have you a telephone in your home? Yeah!—Well, that's fine. Use your party or private line. Take a 16 MM reel from your movie projector and make sure it is not over 400 feet. Larger reels are not practical, for too much winding makes some fishermen "tight." Look around for



a six foot temperance leader (if you can find one that tall). A Union Leader also can be used if you are a "dues" worm.

Now consult a local baseball player and get some tips on high and low flies. If you can draw flies, everything will be "hunkey dory." Just snitch an ink blotter from the writing desk and cut out flies. These will make excellent dry flies. Tying blotter flies will call for every ounce of your energy if you can tie in with Joe Louis' hooks. A water main line and bar flies are recommended for wet fly fanatics.

New Casting Rods

Hurry to an auto wrecker's lot and select a good tempered connecting rod. Then scare up a Virginia or Chicken Reel. Better yet, attend a square dance and grab as many reels as you wish. A bus or railroad line is preferable but for jerky retrieving, use a line of traffic. Secondly, plug casters should cast their eyes at some old spark plugs, attach Joe Louis hooks and you have real killers. Now you are all set.



Sidelight Suggestions

Pack a bottle of castor oil in your kit. All castors should use castor oil for free reeling. Castor oil will move the stiffest and most stubborn of reels. Try casting votes for practice. And, if you saved your boyhood wooden tops you are lucky. Beyond a doubt, they're the best spinners in the world.

Beginners Hints

Start your piscatorial career by catching catfish. Bullheads have no scales so they can't get a weigh. Last, but not least, the bait fishermen must not be forgotten. For them, ballyhoo and propaganda are the best baits for suckers. To end this complicated inferno of fishing tips, just throw in a couple of horseshoes for sinkers. Good luck and goodbye ol' ways.

Finale

Any readers who fail in the construction or can prove these super modern outfits are unsatisfactory in any way, will be sent free of charge the finest steak dinner that ever bedecked a table . . . Providing they can shoot the BULL.



GREAT OUTDOORS

(Continued from page 20)

But he is happiest when the streams are just "right" for using live minnows, and at those times he vanishes from his usual haunts and hunts a certain "favorite" stream. Then the ones he brings back are of a size and girth to leave you breathless.

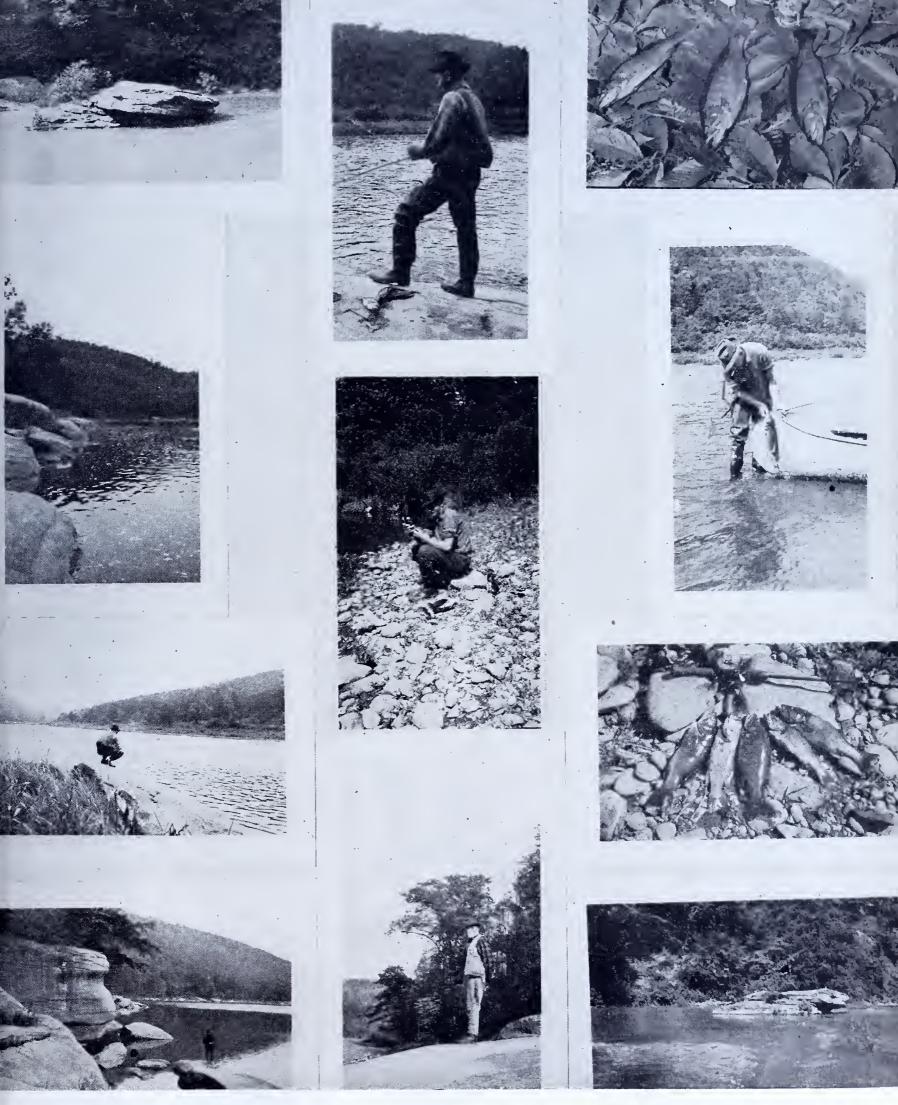
Fly users are perhaps the largest group to lean to favorites. Two years ago I fished Big Portage Creek up near Port Allegany with a wet fly caster who carried two dozen flies in his book—all of them royal coachmen. There wasn't a size or type of that fly he didn't have, from tiny 18 size, to huge size 8. He turned in the top catch for the day. I've fished with dry fly purists, who start out opening day with dry flies, spurning all live lures even though they end up troutless, and sticking hour after hour dropping drys on surfaces of water where sunshine, if any, happens to touch. Most of them get more kick from taking one nice trout than the rank and file do in filling in with the limit.

Some fly fishermen who carry upwards of 50 different styles with them on a jaunt, usually have tucked away in a hidden corner of one of their boxes a battered old remnant of a once lovely specimen. After they have tied on and tried, one after another, dozens of newer and more beautiful modelswith no luck-they start searching for the old "favorite." Out it comes, on it goes, and a peculiar smile of satisfaction descends on the angler's face as he flicks it out over the pools with evident expectation. To inspect this fly and discover its identity is of no avail, because in most instances even the user has forgotten its original name. He carries it with him, because some time or other it produced famously for him. Let's hope it will again.

Anglers favor special kinds of weather, too. One will glory in fishing in pouring rain, another likes his days to be bright and cool, with the sun shining and a cool breeze blowing out of the northwest. Some care not what the weather brings if they may only be on the streams for the "best" hours, and oddly, the best can be at dawn, or at dusk, from 10 till 2, or midnight, depending on the angler himself.

So it goes, with all things connected with the gentle art of angling. If you want to know how it feels to be in a dilemma, appoint yourself a committee of one to take a galloping poll among trouters to discover the mythical perfect angler with a favorite rod, line, lure, stream to fish, weather preferred, etc., etc. Brother, it can't be done. It would be easier to interview the wily trout and discover his ideas on this vast and interest-

Perhaps that's the answer, after all. Cautious, wary, alert to danger, fearful, unpredictable in his habits, he doesn't care a whit about the desires of the fisherman. When he is hungry, he may take a fancy to anything that appears edible—or he may not. Whether a lad or patriarch wields the fishing apparatus stirs him not. However, there is one thing about him, he plays no favorites. We who call ourselves trout fishermen, beginners and experts, can only hope to have the right lure at the right time in the right place—and to feel the surge of a fighting trout. Then—who cares about anything clse?—Pittsburgh Sun Telegraph.



Bass fishing scenes taken on the Upper Allegheny by Richard Esler.



KATYDID

Katy is really a grasshopper,
She's not a DID at all;
She has a hopper's mouth and legs,
But not a hopper's call.
And then she never lives in grass,
But dwells high up in trees;
Her blade-like wings are veined and green
And leaf-like front the breeze.
But nothing on earth that sleeps or wakes
Can rival the noise her husband makes!

It happened on a train.—A little boy was struggling in vain, to put a rather large package on the rack above the seat. An old gentleman, occupying the seat next to the window, said: "Here, Sonny, I'll put it up there for you."

CARSTEN AHRENS.

"Thank you," said the boy.

A little while later, the old gentleman felt something wet dripping on his head and running down his cheek. Looking up, he saw that the package was leaking. He cautiously stuck out the tip of his tongue touched his cheek, and, at the same time turned to the boy, saying: "Pickles, Sonny?"

"No, sir," replied the boy, "puppies."

WITH ROD AND LINE

By CLYDE ROLLER

A new staff of officers was chosen at a meeting of the Harrisburg Hunters' and Anglers' Association. Chris Logan was elected president to succeed M. L. Motter.

N. I. Thomsen, formerly secretary, was elected vice-president; James Schwartz was chosen as secretary, and Earl Diehl was reelected treasurer.

Eleven directors also were selected, the board including M. L. Motter, William Hocker, Sr., O. Ben Gipple, Earl Sheesley, Ray Watkins, George Deibler, Roy Wheeler, Ray Shearer, Chester Rhine, William Mechling and Russell Skinner.

The Association's books for 1943 were closed with 1158 members on the rolls, not including nearly 300 who are being carried while they are in the armed services.

Up the Susquehanna River the Union County Sportsmen's Association and the Milton Fish and Game Association have been active. The Union County organization has moved into new quarters in what was formerly the mess hall of the Weikert Civilian Conservation Corps camp west of Lewisburg.

More than 175 persons attended a chicken supper held last week at the new camp. Wives and friends of members were invited. After the supper John Strohecker, of Williamsport, showed motion pictures of hunting and fishing in different parts of the United States and in Canada.

Speakers included Fish Warden Arthur Snyder and Game Protector Fred Fisher, of Union County; Game Protector A. C. Walker, of Snyder County, and Harold Moltz, of Williamsport, a member of the Pennsylvania Board of Fish Commissioners.

The Milton Fish and Game Association adopted three resolutions affecting hunters and fishermen at a meeting it held last week.

One resolution recommended that the Board of Fish Commissioners be given authority to act on stream pollution. Another carried the recommendation that a hunting license should have attached to it a coupon entitling the owner to purchase a box of shells. Both of these resolutions are to be acted upon later by the Federation of Sportsmen's Clubs.

This meeting also included the showing of motion pictures, Dr. Willard Simpler of White Deer exhibiting films on fishing and another showing an Indian making a birch bark canoe in Canada.—Harrisburg Evening News.

LADY-BIRD BEETLES

Active, sturdy buccaneers,
Hungry, little hemispheres,
Cruising down each leaf, to eat
Every egg or bug you meet.
You like gaudy hues a lot . . .
Here and there a polka dot.
Growers hope you'll come in droves,
Cleaning up their citrus groves.
May you all have long careers,
Hungry, little hemispheres.

CARSTEN AHRENS.

County Sportsmen at Lock Haven

At a meeting held in Lock Haven representatives of the Clinton County Fish and Game Association, the Southern Clinton Sportsmen Association, and the Western Clinton Sportsmens Association effected a joint organization known as the Clinton County Sportsmen's Federation.

This body will have as its basic activity the coordinating of the efforts of the three local organizations. It was felt that such a body could prevent a great deal of duplication of effort and would enable each club to supplement the efforts of the others.

Each member club will have equal representation on the board of directors of the County body. As set up at present the representatives from each club will consist of the President, Secretary, Chairman of the Game Committee, Chairman of the Fish Committee and Chairman of the Membership Committee of each club.

At the same meeting quite a number of resolutions relative to changes in the game and fish regulations were adopted for presentation at the Division meeting.

Those who were present at the meeting last evening feel confident that it was a big step in the direction of better relation and understanding among the sportsmen of the County as well as of better hunting and fishing throughout the area.

-Renovo Record.

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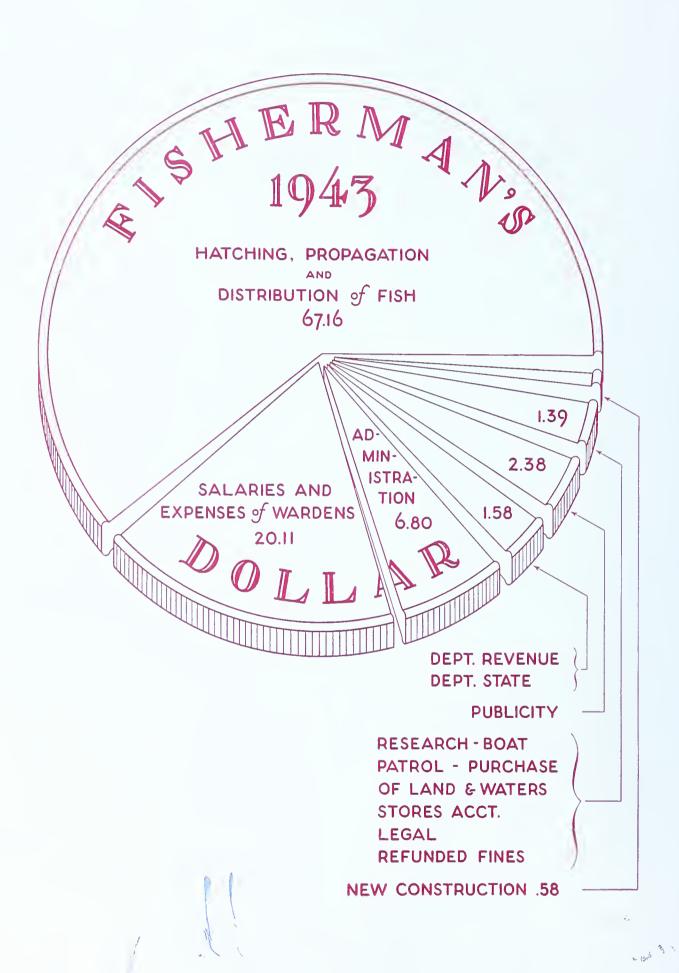
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FINANCIAL STATEMENT—BOARD OF FISH COMMISSIONERS CALENDAR YEAR 1943

	UMI	LLNDAN	ILAN 1940		
BALANCE January 1, 1943		\$ 686,324.71	FIELD SERVICE		
RECEIPTS—Calendar Year 1943		ψ 000,524.11	Salaries	13.255.92	
Fish Law Fines	\$ 9,445.00		Wages	5,817.26	
Commercial Hatchery Licenses			Fees	200.50	
Motor Boat Fines	120.00		Printing, Binding and Stationery	71.38	
Lake Erie Licenses	1,638.00		Materials and Supplies	283.65	
Non-Resident Fishing Licenses			Traveling Expenses	1,469.94	
Tourists Fishing Licenses	4,744.75 4,570.02		Motor Vehicle Supplies and Repairs	106.74 1.07	
Resident Fishing Licenses			Freight, Express and Cartage Telephone and Telegraph	1,045.48	
Motor Boat Licenses	6,188.75		Contracted Repairs	80.50	
Contributions for Restocking Streams	10,400.00		Rent of Real Estate	15.00	
Sale of Publications	3,698.75		Rent of Equipment	52.00	
Eel Chute Licenses			Insurance, Surety and Fidelity Bonds	66.79	
Sale of Unserviceable Property			Equipment and Machinery	8.25	
Miscerianeous	1.00	559,383.16	Total	22,474.48	
			Total	22,111.10	
Total Funds Available		\$1,245,707.87	CONSTRUCTION WORK		
EXPENDITURES—Calendar Year 1943			Wages	1,425.30	
ADMINISTRATION			Materials and Supplies	1,275.13	
Salaries	27.792.00		Motor Vehicle Supplies and Repairs	706.72	
Wages	2,353.61		Total	3,407.15	
Printing, Binding and Stationery	2,754.73			0,101.10	
Materials and Supplies	229.46		EDUCATION AND PUBLICITY		
Traveling Expenses	1,818.88 409.12		Wages	4,372.87	
Freight, Express and Cartage	23.54		Fees Printing, Binding and Stationery	1,650.00 5.966.10	
Postage	1,064.50		Materials and Supplies	203.82	
Telephone and Telegraph			Traveling Expenses	973.63	
Contracted Repairs	45.45		Postage	650.00	
Rent of Real Estate	27.90 193.37		Contracted Repairs	3.00	
Insurance, Surety and Fidelity Bonds Motor Vehicles	1,525.00		Rent of Real Estate	165.00	
Equipment and Machinery			Insurance, Surety and Fidelity Bonds Other Maintenance Services and Expenses	19.54 7.50	
			other Manttenance Services and Expenses		
Total	40,038.24		Total	14,011.46	
WARDEN SERVICE	0.4.404.50		RESEARCH		
Salaries Wages			Printing, Binding and Stationery	38.74	
Printing, Binding and Stationery	,		Materials and Supplies	92.45	
Materials and Supplies			Equipment and Machinery	56.95	
Traveling Expenses	43,702.18			100.14	
Telephone and Telegraph	2,006.83		Total	188.14	
Rent of Real Estate	55.00 406.58		STORES ACCOUNT		
insurance, Surety and Fidenty Bonds	400.56		Materials and Supplies—(Credit)	1,663.22	
Total	118,364.73		Motor Vehicle Supplies	60.48	
HATCHING SERVICE			Total—(Credit)	1,602.74	
Salaries				1,002.11	
Wages			BOAT PATROL SERVICE	00.00	
FeesPrinting, Binding and Stationery			Materials and Supplies	83.30	
Food and Forage	110.379.87		Total	83.30	
Materials and Supplies			LEGAL EXPENSES	1,301.93	
Traveling Expenses	5,779.11		DEPENDENTS BENEFITS	167.20	
Motor Vehicle Supplies and Repairs	14,516.91		By REVENUE DEPARTMENT (Bureau Mis-	F 050 00	
Freight, Express and Cartage	146.60 682.70		cellaneous Licenses)	5,270.68	
Telephone and Telegraph	1,787.08		Retirement Board)	4,025.00	
Light, Heat, Power, Water and Fuel	21,045.27		REFUNDS and REPAYMENTS OF RECEIPTS	125.00	
Contracted Repairs	538.51		PURCHASE OF LAND AND WATER		
Rent of Real Estate	638.00 83.40		Reining Pond		
Rent of Equipment	1,556.98		Huntsdale 400.00	7,900.00	
Equipment and Machinery	352.98				588,637.55
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Total	372,882.98		BALANCE January 1, 1944		\$ 657,070.32
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Balance January 1, 1943		
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		588,637.55
BALANCE January 1, 1944		\$ 657,070.32



ANGLER*



MARCH 1944



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*

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*

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EDWARD MARTIN
Governor

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CHARLES A. FRENCH
Commissioner of Fisheries

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Due to conditions beyond the control of the Fish Commission it has been impossible to maintain a regular publication schedule of the Pennsylvania Angler. Dear Mr. Fox:

I was much interested in your article entitled "Good all season trout fishing in hard fished waters—a postwar possibility" which appeared in the December Pennsylvania Angler. For a long time I have felt that this was the only possible approach to maintaining satisfactory trout fishing in streams and lakes which receive very heavy pressure. No matter how many legal-size trout we raise and plant, we can never meet the demands of the fishermen. The number of anglers will increase in geometric proportion and there is certainly a limit to the number of fish which any conservation department can raise to legal size. This certainly cannot be done for a license of one or two dollars a year or even five dollars a year. It is like the story of a man who lost a dollar on each suit he sold but felt that he was ahead of the game because he sold so many.

I recently published an article in our Department's magazine suggesting lower limits on trout streams and trout lakes. When reprints are available I will be glad to send you a copy.

I feel that Pennsylvania is to be congratulated on the emphasis which it has been placing upon the sport of trout fishing and in lower kills. I am in full agreement with you that this is the only solution to satisfactory angling in the future on public waters.

Very truly yours,

INSTITUTE FOR FISHERIES RESEARCH
A. S. HAZZARD, Director,
Ann Arbor, Mich.

Dear Mr. Fox:

Enclosed find check for \$12.80 for subscriptions to the Pennsylvania Angler for the names on the enclosed list. These boys are all members of the Bethlehem Game, Fish, and Forestry Association and are now serving in the Armed Forces. Our Association is mailing these subscriptions to them with an honorary membership card in our Association for the duration.

We believe the boys will be interested to know who their officers are and what some of the activities of the Association are at this time. The officers just elected at our annual meeting held on the third Monday in January are as follows: Mr. Graydon U. Snyder, President; Mr. Walter W. Fisher, Vice-President; Mr. H. E. Brotzman, Secretary; and Mr. E. J. Riegel, Treasurer.

The delegates from the Association to the Northampton County Federation of Sportsmen's Clubs are Mr. G. U. Snyder, Mr. Charles Matz, and Mr. H. E. Brotzman. The alternates are Mr. Harold Reichard, Mr. Roy Ditterline, and Mr. Paul Stauffer.

We wish to convey to the boys in the Service the thought that this Association is still very active and trying to keep up the sport of fishing so that it will be as good, or better for them, when they return.

Very truly yours, H. E. Brotzman, Sec., Bethlehem, Pa. Dear Charlie:

Received your most interesting letter and was very glad for the information on the line dressing and the plug.

I noticed a little sketch in the January issue about the angler who caught a sucker on a plug. A friend of mine, E. F. Appleman, had this same experience with a plug and then very shortly afterwards caught an 8 pound carp on this plug. Another good fishing pal of mine, John F. Weaver, caught a 10 pound carp on a black squirrel tail streamer with a No. 2 brass spinner, while we were fishing fly and spinner for bass in the Juniata.

I have also had some odd experience in fishing with artificials, so here goes. One day while fishing below Huntingdon in the Juniata, Appleman and I were plugging for bass. We had made several casts when I noticed a small grass pike or chain pickerel following my lure as I retrieved it, but when the lure got within 10 feet from me the pike would stop and just lie there. Finally I picked up some river grass on my hook, a South Bend Sun Spot Spoon. I stooped over to pull the grass off the spoon and this pike jumped at this spoon, hit my arm, then fell back into the water. I often wondered why the pike jumped at this while out of the water, unless the sun made a reflection on the spoon which attracted him.

Later in the season I was plugging and a dipper duck, feeding along the shoreline, followed my plug. The lure was a floater and diver and when the plug went under the water the duck went under after it, but fortunately I did not hook the duck.

Yours truly,
BROWNIE SHERMAN,
Williamsburg, Pa.

Dear Sirs:

I am enclosing 50 cents for another years subscription to the Angler. I have been reading the Angler for five years now and I enjoy it very much. Most of my buddies in this Division, the 80th Blue Ridge Division, are Pennsylvania boys. I pass the Angler on to them to read.

Lots of luck to the boys for a good 1944 season.

Sincerely yours,
Pvt. Edward Naughton.

Gentlemen:

Enclosed find one dollar to renew my subscription to the Pennsylvania Angler for two years. Try to get the next issue to me as I don't want to miss any. After reading them I send them to my son, who is with the Marines in the South Pacific. They are read and enjoyed by the boys over there.

Yours truly,

ELMER E. MUIR,

Swissvale, Pa.

(Continued on page 24)

APRIL-FOOLING THE TROUT

By FRED EVERETT

Illustrated by the Author

A S I write this, the world outside is deep under one of those beautiful, softwhite snow blankets. It snowed all day yesterday, all last night and the air is full of those big lazily floating flakes. Everything—each tree, branch and twig, carries its load of fluffy white water crystals that soon, ere you read this, will be rushing down turbulent streams, bringing life (and dangers) to countless numbers of trout and other fish.

Takes quite a stretch of the imagination to jump from the fairyland outside my studio window to those joyous days of expectancies in mid-April. Yesterday, as I drove through the swirling storm, I passed one of our trout streams. Ice jutted out from the shores, all covered with thick snow smoothly rounded at the edges like frosting an an angel cake. The waters were dark, without the appeal so strongly felt after the trout season opens. Myriad snow flakes descended upon the surface, disappearing as if by magic as they touched the deep green elements and became a part of the trout's world.

I thought of the trout, wondering how they liked the storm and what they were doing throughout the long winter months. I wondered how they felt the cold until I suddenly realized they couldn't feel the biting, sub-freezing winds above the water, for down under the surface it never gets as cold as freezing. So the trout always have a temperature above 32 degrees in which to live. They've got something on us, at that

As I sit here, writing, there are only two months to wait to join the trout in the waters and try out a few April fool tricks on him. By the time you read what I am

writing, you will be on the anxious seat, checking off the last few days, then the hours before another trouting year is born. The whole idea brings a sensation only trouters can ever experience.

What will that day and those to follow bring? Will the streams be high? Or low? Or, as happens once in a life time, just right? Will the trout be in our favorite stretch of water, or in the other fellow's? How shall we fish for them? The same as last year or should we use new lures or new methods? Will they be out, hitting the lures, or will they be coy and hard to tease or fool?

About a month ago Charlie Fox sent me a dozen of our favorite, early season wet flies. Ever since then I've had a fever which can be held in check only by tying flies during the evenings, or by painting such covers as is on the front of this issue of the ANGLER. While painting the cover, I thought over the possibilities of each fly and how I would fish it, once I got in a trout stream in April. Suddenly an idea hit me-why not write down those thoughts and share them with you anglers. Maybe you have better ways of using the flies and will be kind enough to write and tell me. So, very briefly, here is what I think the lures on the cover will do and how I like to fish

The flies represent types of wet lures rather than any particular fly. What I am going to say refers to them as groups although, in each group, I do have my favorites. Probably you will have different favorites—that's one of the reasons fly fishing is so much fun. Your favorite is just as good as mine, mine is just as good as yours (I hope). It is knowing when, where, and how

to fish them that makes the difference between good and bad luck.

First, let's take up the idea of when to fish a particular lure. As most of you probably know, there is a time to fish a fly and a time when not to fish it. For example, I can see no value in fishing tiny flies in turbulent waters. Or big clumsy lures when small, easily handled flies are more effective.

Many anglers believe that the time of year decides which flies to use. In some respects that is true, in others it is not. However, since we are talking about April waters, the time element can be forgotten so far as the wet lures are concerned. We are much more concerned with the water in which we hope to fish. From opening day right on through April, there are times when the smallest fly in your kit or the biggest atrocity you have the nerve to carry, can be used successfully. Thus the "when" element because, in the same stream, there are spots where one type of lure should be used, and others where a different type is most effective.

If we could only know when the trout are up feeding or when they are feeding on the bottom, many of our worries would be over. Smaller lures can be used on surface feeders than on those which are bottom feeding because it takes a bigger fly to attract a trout's attention through a greater amount of water.

Of course, by the trial and error method, we can finally discover where the trout is feeding. But, while that may be good for one spot, the next pool may offer a different

(Continued on page 18)



MURDER

By SPARSE GRAY HACKLE

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IF fishing interferes with your business, give up your business," any angler will tell you. He will relate direful stories of men who have lost health, fortune, family and friends through wilful failure to take a little recreation on the stream. He will remind you that "the trout do not rise in Greenwood Cemetery" and that you therefore had better do your fishing while you are still able.

But you will search far to find a fisherman who will admit that a taste for fishing, like a taste for liquor, must be governed lest it come to possess its possessor; that an excess of fishing can cause as many tragedies of lost purpose, earning power and position as an excess of liquor.

This is the story of a man who finally decided between his business and his fishing, and of how his decision arose from the murder of a trout.

The man was George Kraft. Fishing was not a pastime to George; it was an obsession. He was really insane about it. That, by the way, is fairly common. Your successful fisherman is a man who is not really enjoying a recreation, but who is grimly, if subconsciously, reenacting in miniature the unccasing struggle of primitive man for existence. He is indulging in a species of fantasy, an absorbing make-believe which is a refuge from the realities of life. That's what makes him a successful angler-it gives him that last measure of fierce concentration, that final moment of unyielding patience, which in fishing makes the small but vital difference between fish and no fish.

Well, George Kraft was that kind of fisherman, more so than any other I ever knew. Waking or sleeping, his mind ran constantly on the trout and its taking, and back in 1932 I often wondered whether he could keep on indefinitely, doing business with the surface of his mind and fishing with the rest of his mental processes-wondered, and feared that he could not. So when he called me one spring day in that year and said, "I'm tired of sitting here and watching a corporation die; let's go fishing," I knew that he was not discouraged with his business so much as he was impatient with its restraint. But I went with him; maybe I'm a bit obsessed, myself.

That day together on the river was as a thousand other pages from the book of any angler's memories. There was the clasp and pull of cold, hurrying water on our legs, the hours of rhythmic casting, and the steady, somnambulistic shuffle which characterizes steel workers aloft and fly fisherman in fast water. Occasionally our heads were bent together over a fly box; at intervals our pipes wreathed smoke, and from time to time a disjointed remark broke the silence.

We were fishing "pool and pool." As I started at one, George would walk up to start at the next above; when I had reached his starting point I would walk around him and start again in the next pool above him.

So we continued up the stream, until late

afternoon found me in the second pool below the dam, throwing a long line up the stillwater. There was a fish rising to some insect so small I could not detect it so I had on a tiny gray fly, on a long leader with a 5x point.

George came by and went up to the Dam Pool. I lost interest in my refractory fish, reeled in, and walked up to watch for there was always the chance of a good fish there. I stopped at a safe distance and sat on a rock to watch with my leader trailing in the current to keep it wet, while George systematically covered the tail of the pool and finally, satisfied that there were no fish there to dart ahead of him and give the alarm. stepped into it.

His body became tense, his posture that of a man who stalks his enemy. With aching slowness and infinite craft he began to creep up the pool, and as he went his knees bent more and more until he was crouching. Finally, with his rod low to the water and one hand supporting himself on the stream bottom, he crept to a casting position and knelt in midstream, with water lapping under his elbows. His left sleeve dripped unheeded as he allowed the current to straighten his line behind him. I saw he was using the same leader as mine, but with a large No. 12 fly.

"George—using 5X?" I breathed. Without turning his head he nodded almost imperceptibly.

"Better break off and re-knot," I counselled softly, but he ignored the suggestion.

I spoke from experience. Drawn 5x gut is almost as fine as a hair. It will stand something like a one-pound pull when perfectly fresh, but loses most of its strength with the least chafing. We both knew that a fly as heavy as No. 12 must be broken off and knotted on a fresh every little while, to prevent the breaking of the leader where the gut is chafed by the eye of the hook.

I kept silence and watched George. With his rod almost parallel with the water, he picked up his fly from behind him with a light twitch and then false-cast to dry it. He was a good caster; it neither touched the surface nor rose far above it as it whipped back and forth.

Now he began lengthening his line, until finally, at the end of each forward cast, his fly paused in the air an instant above a miniature eddy between the fast water and the handsbreadth of still water which clung to the bank. And then I noticed what he had seen when he entered the pool—a sudden dimple in the water, which denoted a big fish feeding on the surface.

The line came back with a subtle change from the wide-sweeping false casts, straightened with decision and swept forward in a tight roll. It straightened again in front of him, whispered through the guides of the rod, then checked suddenly. The fly swept around in the arc of a small circle as an elbow took form in the leader, and settled on the rim of the eddy with a small loop of

slack leader lying upstream from it in the faster water. It started to circle as the main current carried down the slack, then disappeared in a little dimple and I could hear a faint sucking sound.

It seemed as if George would never strike, although his pause must have been only momentary. Then his long line tightened—he had out fifty feet—as he drew it back with his left hand and gently raised the rod tip with his right. There was a slight pause, and the line began to run out slowly.

Rigid as a statute, with the water piling a little wave against the brown wader cloth at his waist, he continued to kneel there while the yellow line slid almost unchecked between his extended left thumb and fore-finger. His lips moved.

"A big one!" he murmured. "The point'll never hold him if he gets started. I should have changed it."

The tip of the upright rod stayed steadily and but slightly bent as the fish moved into the circling currents of the pool, created by the spillway at the right side of the dam. George took line gently and the rod maintained its bend.

Now the fish was under the spillway, and must have dived down with the descending stream of water for I saw a couple of feet of line slide suddenly through George's hand. The circling current got its impetus here and this was naturally the fastest part of the eddy.

The fish came rapidly toward us, riding with the quickened water, and George retrieved line. Would it follow the current around again, or leave it and run past us? The resilient tip straightened as the pressure was eased. The fish passed along the downstream edge of the eddy and swung over to the bank to follow it around again, repeated its performance at the spillway and again refused to leave the eddy. It was troubled and perplexed by the strange hampering of its progress, but it was not alarmed, for it was not aware of our presence—at the nearest it was sixty feet from our kneeling figures—and the pull on it was not enough to arouse it to frenzy.

Every experienced angler will understand that last statement. The pull of a game fish, up to the full limit of its strength. seems to be in proportion to the resistance it encounters. As I watched the leader slowly cutting the water I recalled that often I had hooked a trout and immediately given slack, whereupon it invariably had moved quietly and aimlessly about, soon coming to rest as if it had no realization of being hooked. And I thought, too, of what Bill Mackey had told me about using a heavy rod for weakfish-that it produced a shorter fight but a more furious one. fish has just so much fight in him. On a light rod he expends less of it over a longer time; on a heavy rod, he expends more of it in less time," he had said.

I realized now that George intended to get
(Continued on page 18)

FLY CASTING THE EASY WAY

PART III

Dry-Fly Casting

By JOHN ALDEN KNIGHT

THE WET-FLY fisherman, when he first takes up the use of the dry fly, is confronted with two new casting problems. The dry fly is usually fished upstream, and the moment that the fly alights on the water it begins to drift toward the angler. Slack line accumulates at once and this slack must be taken care of so that the angler always can be in a position to strike a rising fish. To a man who is not accustomed to the handling of appreciable quantities of slack line, this is apt to be confusing.

Handling the Slack Line.

There are three accepted methods for the handling of slack line. The most common of these is to gather in the slack with the left hand, holding it in loops as it accumulates. Some men place the line over one of the fingers of the casting hand and take

up the slack by stripping it in over that finger. This method enables the angler to have a tight line at all times, but it is a bit awkward and allows the accumulation of small loops only. An easier way is to grasp the line directly behind the hand guide (the guide nearest the reel) and draw the slack through the guides until the left arm is fully extended to the side. Then pick up the slack in a fairly large loop in the left hand and repeat. There is only an instant when the angler is not in a position to strike, and the line can be seized in plenty of time to strike should a fish rise to your fly when you are forming a loop of slack.

The third method consists of holding the line between the thumb and forefinger, meanwhile rolling small loops of line over the little finger and back to the thumb and forefinger again. These small loops are ac-

cumulated in the palm of the left hand. Unless the line is particularly soft and pliable, this method is apt to be quite wearing on its finish and the sharp bends do not straighten completely when the line is recast, thereby cutting down the ease with which it shoots through the guides. My preference is the second method described.

A few men, instead of holding the slack line in loops, allow it to trail in the water beside them. This is a dangerous practice as there is always the chance that the angler may step on the line and ruin it. Also, it keeps the line constantly wet, causing it to sink when it is recast.

If a long drift of the fly is desirable (as it is frequently on quiet water) often as many as four or five large loops accumulate in the left hand before the fly is picked up and recast. To attempt to "shoot" all of this



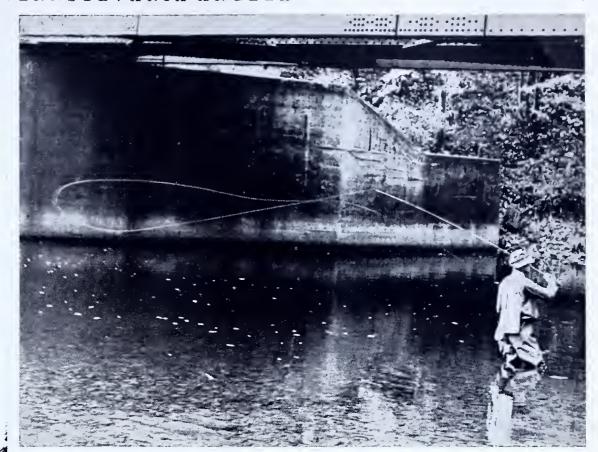
The wide bow. Jack Knight casting.

line at one time during your power cast is a fairly large order. The better plan is to "double shoot" the line (work the loops out gradually, one at a time, on the forward and back false casts) while you are false casting, thereby leaving only one or two loops for the final cast.

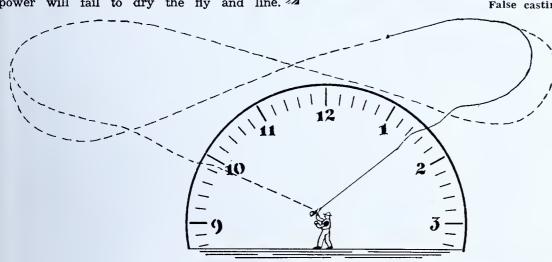
False Casting

When a dry fly is picked up from the surface of the stream to be recast, it and the line that must be dried before the recast is made. Both the fly and the line having been dressed with waterproof dressing before use, all that is required to keep them afloat is to shake off the water that clings to them after the pick-up. To do this, switch the line and the fly back and forth through the air by what is known as "false casting."

To be done correctly, false casting has a somewhat different technique than simple wet-fly casting. Too many men, while false casting, use exactly the same motions as those employed in the simple wet-fly cast. The result is that their false casting is slow, labored, and insufficient for accomplishing the purpose for which it is intended. Too much decision and power with this style of casting will snap off the fly, while not enough power will fail to dry the fly and line.



False casting over the left shoulder.



THE "FIGURE EIGHT"

Plate 1.

of ending each journey with a sharp snap. The added speed will throw off the water from both the line and the fly so that they will float well when they are recast.

Because of the fact that about seventy-five percent of the casts that are made while dry-fly fishing are false casts, it is easy to see that dry-fly fishing very well can be the enemy of sound timing. If the dry-fly fisherman will recognize this fact, he will have fewer casting troubles. So many men allow a false cast to complete itself into the final or power cast when they are dry-fly fishing. This is a serious mistake. The faulty timing of the "figure eight" is not conducive to accuracy. Lacking decision, the slightest puff of wind will deflect a false cast.

(Continued on page 20)

To false-cast properly, the pick-up should be made in the usual way, with the final impulse delivered to the back cast at the "one o'clock" position. Instead of stopping the rod at "one o'clock," however, the rod tip should follow through until it extends well back beyond the shoulder, pointing almost in the direction of the back cast. Before the line has reached the end of its rearward journey, the forward cast should be started. The follow-through on the back cast will provide enough additional acceleration and power so that the forward cast can be brought through quite smartly. Then, before the fly has reached the end of its forward journey, the rod tip having followed through with the forward cast to a point just below the "ten o'clock" position, a new back cast is started and the process repeated.

If the false cast be handled in this way, shorten the timing of each forward and back cast and putting more than the normal amount of power into each part, forward and back, the fly and the line will travel in what is known as the "figure eight." (See Plate No. 1) The speeding up of the timing causes the fly to come around in a fairly wide curve at each end of the cast instead



Mr. Charles Ritz of Paris, France, casting.

YOU CAN WADE IN SAFETY

Pitfalls Await the Feet of the Unwary or Careless Angler, but He Who Knows the Tricks Can Travel Any Trout or Bass Stream

By DICK FORTNEY

HE WAS a man well up in years, spending a vacation in the Michigan resort country near one of the famous trout streams of that state. He was one of those anglers who delight in the solitude they find in trips astream without human companions, so his family was not particularly concerned one morning when he set out for a favorite creek.

But when, at nightfall, he had failed to return to the cottage, other vacationers and guides in the locality organized a searching party and went to the stream where the man had told his wife he intended to fish.

The searchers found the angler a couple of hours later. His cries for help attracted their attention as they walked along the stream shore, scanning the banks and water with flashlights.

The angler was standing in water breast deep. He was clinging to a fragile limb of a small tree which extended out over the stream. He was at the verge of complete exhaustion.

Strong arms pulled him to safety, and he gasped out his story of how he had been wading along the sandy shore when he suddenly stepped into a bed of quicksand. He lost his head at first, and his wild struggles only embedded him more firmly in the treacherous sand. Then good sense came to his aid, and he grabbed the overhanging branch.

He had not dared to attempt to pull himself free. The branch was too fragile; it was the only one within his reach, and he knew that if it broke he would sink into the sand until he drowned.

His mishap had occurred just before sunset. He had been waiting desperately for rescue for about three hours. Because of his age, it was a week before he recovered from his experience.

I've never forgotten this story since it was told to me by a friend who was a member of the rescue party and who talked to the elderly angler afterward. It seems to me a most fitting beginning for an article on the subject of wading.

There's another story with a less happy ending. It is the story of another elderly man, a chronic sufferer from a slight heart ailment, who attempted to wade a branch of the Susquehanna River one afternoon. The stream was low and the footing not bad at all, but in the middle of the stream this man suffered a heart spasm. He collapsed and drowned in not more than a foot and a half of water. His companions came upon his body while they were making the same crossing hours later.

Wading is an essential part of modern fishing. Sitting in a boat or along a shore all day is not the average angler's idea of a pleasant day astream. Also, it's not always practical or possible to fish even a small trout brook while walking along the shore. And there is nothing more refreshing during a hot summer day than to wade into a bass stream clad only in a shirt, an old pair of trousers, and shoes.

Wading, at the same time, is not essentially dangerous, any more than is driving an automobile, rowing a flat-bottomed boat, or crossing a busy street intersection. But as the motorist must know how to control his car, the oarsman his boat, and the pedestrian his footsteps, so the wader has to know his way around in trout and bass

MARCH

Proper equipment for getting about a stream is, of course, the first requirement. Briefly, this angle can be disposed of in about four paragraphs, as follows:

1. Wear boots that are strong and light, for they will prove less burdensome and permit more free use of the legs.

2. Avoid, like a plague, boots that are too large. They are certain to be clumsy, and the most agile angler in the world will not be able to keep his legs and feet under control if he is hampered by boots a couple of sizes too large. Incidentally, boots that are too small are just as bad. They cramp and tire the feet and legs.

3. Waders should be large enough to assure freedom of action, yet not so large that they are unweildy. The lighter the better, for even the lightest waders are considerably more awkward than the clothing to which a man is accustomed.

4. Wading shoes should have felt or hobnailed soles to give them gripping power. Soles of boots should be of felt, or slip-on cleets equipped with hobnails should be worn with them. Ordinary dress shoes are highly unsatisfactory for wading. For one thing, they are not strong enough at the angles; also, their soles are too thin to stand much hard usage. My personal preference is a pair of rubber-soles tennis shoes that can be laced comfortably tight around the ankles, whose thick soles are good for years of wear, and that are extremely light on the feet.

And while we are listing facts about wading, we'll set down what may be summed up as the principal hazards. Here is the list?

1. Slippery rocks.

2. Muck and quicksand.

- 3. Ledges beneath the water surface.
- 4. Heavy currents.
- 5. Treacherous banks.

Now let us consider, point by point, the most sensible methods of overcoming these hazards and assuring our safety.

Traction is the obvious antedote for slippery rocks which the wader encounters in the average Pennsylvania stream.

Worn hobnails should be replaced at the first opportunity, and if it is possible to obtain such goods in these times, felt soles which have been walked thin should also be renewed.

There's a great chance for argument on the relative merits of hobnails and felt, and the average angler is pretty much bewildered by the conflicting advice that is offered him. My own experience has been that felt is ideal for what we may call



Trapped in quicksand, he clung to the overhanging branch of a small tree.

soft stones and rocks that are mossy, while hobnails fill the bill on granite and other rocks which are extremely hard and smooth

I hate both boots and waders for midsummer fishing, and it is quite surprising the foot security that rubber-soled tennis shoes provide under almost any conditions. I suspect, incidentally, that I slip less in tennis shoes for still another reason. They are extremely light on the feet and permit fast foot-work to avoid spills or sudden duckings.

Muck and quicksand are no problems at all if the angler will just remember to stick to gravel bars when the footing is uncertain—and gravel bars in streams are made up of rocks from the size of walnuts up to oranges. Gravel bars are solid and safe. A stream bottom that is muddy or sandy deserves careful inspection and testing before the angler is safe to trust his weight upon it, and this is especially true if the fisherman is wading in water with which he is not completely familiar.

Many an angler has lost his life, down through the years, because he stepped off a ledge into deep water and drowned. There is no excuse for that. Fooling around ledges in deep water while wearing boots or waders is rank carelessness.

In nine cases out of ten, besides, the best fishing spot in any trout or bass pool is the water immediately around an underwater ledge, and no angler who ranks higher than a novice would go wading into such a spot, no matter how safe it might be.

The underwater ledge that runs at an angle and whose surface is extremely smooth should be avoided. There simply is NO absolutely safe way of traveling on it.

The ledge that has no sudden slopes to throw a fisherman off balance and that is rough and uneven enough to offer safe footing is not dangerous unless the water is cloudy. In clear water all the angler has to do is to use his eyes and his feet—that is, to watch vigilantly the nature of the surface on which he is about to step, so that he doesn't walk off the ledge into a deep hole, and to feel his way along, making sure of the security of each foot before he allows the weight of his body to rest upon it while he swings the other foot forward.

Heavy currents are the bugbear of all fishermen, the toughest problem the wader has to solve and the most severe test of his agility and sense of balance.

Of course, you can use a wading staff, and lots of anglers do, but most men have never tried a staff and have no desire to use one because of the necessity for lugging it around with them. In an emergency, incidentally, a stout pole cut along the stream can be a very real help in fording a bit of rough water.

The secret of wading fast water is good foot-work.

The feet should slide gracefully from one standing point to another, being raised just enough to clear the bottom. Thus the body oalance is maintained, and the current will not have a chance to bowl you over while you stand on one leg, like a crane looking for a meal.

Make sure, also, of the security of each spot in which your foot is planted. Test it gingerly with only part of your weight, to see if the rocks are firm or whether



He could not let go of the charged wire.

they will roll under your full weight. Don't ever trust large, flat rocks. Small patches of gravel that collect at the downstream side of a creek boulder are secure and comfortable stepping places. As a general rule, the smaller the rocks over which you are wading, the less likely are your chances of suffering a fall.

Keep your knees bent slightly all the time. If you lose your balance while walking stiff-legged, you are sure to go down.

But if the knees are flexed you can get your legs and feet into motion in a split second and regain your balance. Fancy skaters and tight rope walkers are well acquainted with this fact.

Another point worth remembering is this: You can make the current help you in your chore of wading a stream. If you are crossing a creek from one shore to another, set out from a point well upstream from your destination on the opposite side. Then wade in a quartering direction downstream. That way the current pushes you along; you don't have to fight against its downsweep.

You can also actually lean against a swift current if you get into difficulties in fast water. This trick requires a nice sense of balancing, but it can be done, and with rather surprising ease at that.

Treacherous banks are a real hazard, especially in the spring, when the ground is wet and soft. And so, I might add, are electric fences which some farmers insist in stringing across streams.

I know a chap who was wading a small trout brook one afternoon when he came upon a deep pool that he simply could not negotiate, even though he was wading without the burden of either boots or waders. The only way out was for him to climb a decidedly steep, although not especially high, embankment.

He grabbed a couple of roots to hoist himself upward, and then he had a nasty experience.

The roots pulled out of the soft earth, and he toppled back into the stream. He grabbed instinctively and got hold of an electric fence—with barbs.

His yells of pain brought a companion on the run. He could not let go of the charged wire and, since his clothes were wet, he was really feeling the electricity. His friend yanked his hands free (the friend was bearing boots and was dry) but the barbs on the wire inflicted some nasty wounds on the palm.

Now we might sum up the whole discussion of wading with that incident and boil it down into one word—carelessness. It explains the vast majority of wading mishaps.

The angler who is constantly on his guard and prepared to meet the tests of the five hazards of wading—slippery rocks, muck and quicksand, underwater ledges, heavy currents, and treacherous shores—is as safe in a trout or bass stream as he is walking downtown to buy a new gadget or two at the sporting goods store.

Result of the Harrisburg Hunters' and Anglers' Association Big Fish Contest of 1943, which was sponsored by the Harrisburg Hardware Company.

Prize	Species	Length	Weight	Angler
1st	Brook Trout	15 in.		R. W. Fish
2d	Brook Trout	14½ in.		R. E. Gardner
1st	Brown Trout	$22\frac{1}{2}$ in.	2 lb. 15 ozs.	William F. Brown
2d	Brown Trout	22 in.	4 lb. 8 ozs.	Russel Ostott
1st	Rainbow Trout	$23\frac{3}{4}$ in.	3 lb. 9 ozs.	C. H. Kirk
2d	Rainbow Trout	$20\frac{1}{2}$ in.	2 lb. 15 ozs.	M. F. Kahnev
1st	Smallmouth Bass	$23\frac{1}{2}$ in.	7 lb. 4 ozs.	Roy M. Boyer
2đ	Smallmouth Bass	$21\frac{3}{4}$ in.	5 lb. 3 ozs.	L. H. Southly
1st	Largemouth Bass	$27\frac{1}{4}$ in.	4 lb. 6 ozs.	John E. Miller
2d	Largemouth Bass	$19\frac{1}{2}$ in.	41/4 lbs.	Ross Hartman
1st	Salmon (Wall-eye)	$29\frac{3}{4}$ in.	7 lb. 7 ozs.	John W. Russ
2d	Salmon (Wall-eye)	28½ in.	6 lb. 8 ozs.	Harry E. Steffens
	Pike (Pickerel)	$22\frac{1}{4}$ in.		Charles Hoover
	Rock Bass	9½ in.		H. E. Steffens
	Sucker	20 in.		Ed. Crumlich
	Catfish	$20\frac{1}{2}$ in.		James Duke
	Yellow Perch	$14\frac{1}{4}$ in.		R. L. Rineard

A FLING AT FLY CASTING

Some Hints for the Beginner

J. B. KELL

Illustrations by the Writer

HAS any trout fisherman or flycaster forgotten his first attempts at laying out a In your writer's opinion, nightmares and flycasting have something in common. My initial attempts at this glorified method of angling left me worn out, perspiring and muttering imprecations that condemned everything relative to flycasting to a somewhat questionable hereafter. Prior to succumbing to the charm of fly casting, fishing "a' la Huckleberry Finn" had been highly satisfactory, but being an interested witness to the removal of nine beautiful large mouth bass in one evening from their native element (and their safe return) via the fly casting method, the reader may imagine the startling transformation that might be expected. The whole performance had looked very simple, therefore, why not duplicate it? Several evenings later found me at my favorite pond with a nondescript 9½ foot, 7½ oz. flyrod that you readers may consign to what ever fate you believe such a "pole" deserves, and take the line too-it wasn't much better. I had come into possession of these antiques by the process of securing permission from some of my fishing friends to "root" through their cellars and attics. And with this prize equipment, the rudiments of fly casting were to be learned. The first half hour was given over to maneuvers—the second half hour to contortions. The next hour combined the outstanding characteristics of both. From then on, the curtain of charity may be drawn over the entire performance. With a rod undoubtedly sired by a billiard cue, and a line suspiciously similar to a roll of binder twine, what kept me from throwing the works into the drink? In pausing once or twice to mull the situation over, the thought occurred that perhaps proper tackle was the answer to a lot of my problems. However, due to lack of finances, the possibility of learning to fly cast with suitable equipment was too remote, so I continued on and had to contend with back casts that didn't go back-forward casts that ended with the line around my neck, unwieldly flies which persisted in penetrating my anatomy anywhere from knee to shoulder, but seven out of ten times, leaving a group of distinguishing marks on a certain part of my physical makeup which would have done credit to an amateur rifleman attempting sight alignment by "grouping." But that is to be expected when a beginner undertakes to instruct himself in the art of flycasting using inferior equipment.

One evening as my sorry performance was about to end, I was approached by an old veteran fly fisherman whose technique with bass bugs was a beautiful sight to behold. We struck up a conversation and before long he was aware of my predicament from start to finish. He examined my equipment, pronounced it unfit for the job and invited me to his home for a discussion and to inspect his fly casting equipment.

The evening was well spent, and some mighty valuable information was stored away for future use. Before leaving for home, my host allowed me to select a few books on fly fishing plus a lot of miscellaneous matter that helped fill his fishing library. It was among this literature that I found the information that changed my entire perspective on fly casting, I imagine that every beginner has his own mental picture of how to fly cast-your ideas on the subject may differ radically from mine, but each of us in our own minds, believes that our principles as applied to the rudiments of flycasting, cannot fail to produce results.

If this condition exists, I would advise every beginner to avail himself of a little booklet put out by a leading tackle manufacturer which contains illustrations showing the proper method to follow in learning to flycast. This little booklet can be secured for the asking, and it is the writer's opinion that it is the finest aid to the beginner that has ever been published. It also offers some mighty fine suggestions on the proper tackle to be used and that is another mighty important item to be considered by the beginner. After all, a large number of beginners have this question in their minds-What kind of tackle is required, and above all, how much will suitable tackle cost?

Before we go any further, it is to be distinctly understood that I hold no malice toward anyone who by their adeptness in the art of relieving me of my money, has contributed to my knowledge of tackle. In learning to fly cast (and plug cast) my approach to a tackle shop was noted with extreme pleasure by the "man behind the counter." I was the prime guinea pig for experimental "high pressure" methods of salesmanship, and being ignorant of the proper equipment to buy, I was weighted down with useless gadgets which that particular tackle dealer never had expected to sell. Due to the fact that money came rather slowly in those days, it was sometimes a better pill to swallow to discover that I had been induced to buy gadgets that weren't worth a dime, but sold for ten times that much. Many a beginner, due to his ignorance, has been subjected to this painful experience, and once is generally enough for most of them.

It is not the intention of the writer to convey the thought that all tackle salesman are limited in their knowledge of fish and fishing, but there is a goodly percentage of them in that category, who are able to convince the tyro that his (the salesman's) knowledge of his particular problem is unlimited and that he can recommend the purchase of this or that because he knows it fills the bill, etc.—When this point has been pounded into the head of the beginner, the rest is simple. Another man is sold a bunch of worthless equipment and finds it out only when he uses it for the first time. How many readers know of similar cases occurring to them or to their friends?

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In order to form some idea as to the immensity of the subject, let us go further. During the past five years, let us assume that there have been 100,000 new fishermen added to the rolls in Pennsylvania. (Actually the figure is nearly double this, but for purposes of clarity, we will use the above number). In order to begin fishing, each one of these newcomers was required to invest in tackle and equipment. Perhaps 35% or 35,000 new fishermen decided to follow trout fishing. Each of these 35,000 would invest an average of \$20.00 per man for his new tackle which may be itemized as follows-Rod \$8.00, reel \$3.00, line \$4.00, leaders, flies etc., \$5.00. It is the writer's opinion that this is the minimum figure for tackle procured from a reliable manufacturer, and the amount of \$20.00 can be invested in any one item above. Using this low figure however, we can see that \$700,000 has exchanged hands.

Let us go on by assuming that 45% or 45,000 of these new fishermen decide on bait casting and that they in turn average \$20.00 each, for rod, reel, line, plugs and "extras." Another \$900,000 has been deposited in the cash drawers of the tackle dealers. Add to this the average cost of \$5.00 per man for the remaining 20% or 20,000 men which enjoy catfish and sucker fishing, and another \$100,000 can be added which results in a total expenditure of \$1,700,000. The ratio of trout to bass to sucker fishermen may be off in this assumption, but conservatively speaking, there has been a minimum of one and one half millions of dollars expended by these 100,000 new fishermen in exchange for fishing equipment which in a great number of individual cases represented money thrown away. This is a pretty steep price to pay for experimental purposes. But we still continue to do it annually because of our ignorance of what tackle to buy. Fortunate indeed are those who, by reason of knowledge and experience are able to get the most in tackle for the least amount of money. However, those same chaps will inform we tyros of little knowledge that it is not necessary to spend a month's salary in order to get tackle that is entirely sat-

It has been the writer's privilege during the past two seasons to meet and fish with some of the best fly fishermen in the state. Their knowledge of fishing and fishing equipment has been gained by the "trial and error" method and is therefore sound and practical. Some of these fellows are constantly experimenting with all phases of angling, and new ideas are propounded and discussed at numerous "bull" sessions. Today as a result of this, we have some very practical and interesting methods of fishing which have been devised for our use-the chief one of which is the use of the light bait casting lure in bass fishing—the result of many arduous hours of experimentation on the part of Charley Fox, who in the past, has written numerous fine articles on the subject for the Angler. Charley has not only conclusively proved that this comparatively new method is a decided step toward the conservation of our bass forage supply, but also that it is a more interesting and sporting and effective method of taking bass. However, that is a story in itself, so let's go back to the subject of this article—flycasting.

It is the hope of the writer the ensuing paragraphs of this article and the accompanying sketches will shed some light on this business of flycasting from a beginner's point of view.

Flycasting is, in effect, line casting. Too many beginners believe that an expensive rod is the only requisite necessary for perfect flycasting. Too often, in making his initial purchase, the beginner will select a beautiful rod and add to it a line that puts to shame a roll of wrapping cord. This combination spells grief from the start and small wonder. Add a nondescript line to a

fine rod and results will be such as to encourage the use of bad language. On the other hand, add a good line to a well built, inexpensive rod and good results are obtainable with a little practice. Good fly rods have always been in existence, but good fly lines have not. Therefore, improvements to the line were necessary, and in our modern up to date lines, we can list three which are paramount in importance (1) improved finish (2) change in taper and (3) decrease in specific gravity. Let us consider these improvements singly and their effect on our flycasting.

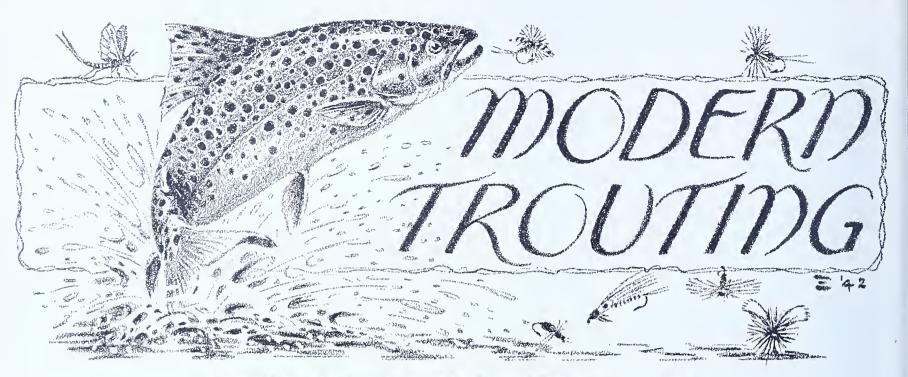
(1) The improved finish of our present day lines is due to the newly compounded elements with which the materials that go into the braiding of a line are impregnated. This principle of fibre impregnation is rapidly finding favor not only in the manufacture of fly lines, but also in the making of casting lines. In preparing the different strands for braiding into the finished product, the various strands are immersed in a solution which renders the line in its entirety more durable and impervious to water. Prior to the adoption of this principle, the entire

line was braided and then finished, which naturally caused water logging and sinking once the finish became worn. This new finish to our fly lines provides much greater flexibility as well as ease in handling. Nearly all the lines made today by reliable concerns have a finish that will stand up under hours of hard usage. A little line dressing now and then will keep your line in fine condition and should be used in order to protect the finish imparted by the maker. To the beginner who is interested in purchasing a line it is recommended that the product of a reliable concern be given preference. There are many prominent line manufacturers who will gladly send you their catalog on request.

Improvement No. 2 represents a decided step forward in fly casting, but may present a puzzling problem to a beginner, due to his ignorance of what constitutes a "tapered line." In order that the amateur may visualize a tapered line as we continue, refer to Fig. 1 which shows in exaggeration a single tapered line (a), and a double tapered line (b). Nearly all our present day fly lines (Continued on page 16)



Opening day 1943 on Penns Creek near Penns Cave. The temperature hovered around 8 above. In the angling group were: Del Batcheler, Herb Watts, Ken Waltower, Harold Fisher, Dick Moore, and the photographer, Doc. Banker, all of Huntingdon.



A RECORD IN THE FISHING LOG

By CHARLES K. FOX

"A day in the field or on a stream, if well remembered is never lost; rather it becomes, by a sort of compound interest, more treasured through the years."

HARLEY C. NOLL

ONCE in the proverbial blue moon the fisherman experiences a red letter day which will forever hold a place in his memory. It is not necessarily a great fish or an abundance of action which makes this day so impassive; it may be a peculiar circumstance, or a happy reunion. On rare occasion it is a combination of all. It was my great fortune to enjoy such a day early last season. The highlights are recorded in the field book and every now and then it is pleasant to peruse that page. The experience is being mentioned in the hope that it may prove helpful or of interest to some members of our angling clan.

4/16/43 at the great limestone spring. The early morning water temperature was 56° and the air temperature 30°. This is a typical early season condition here.

Many trout were breaking the surface on the four acre area. Upon our arrival in the morning small flies were hatching in abundance and the rise was great. This is the rule rather than the exception in this particular clear spring water with its mud bottom fairly well covered with vegetation. The place is alive with trout food that is active the year around in the water of fairly constant temperature and volume.

As usual we put on our 12 foot 4x leaders and to each, each one of us bent a size 18 or 20 quill body wet fly. Ginger Quills, Olive Quills, Quill Gordons, Newville Midges and Starlings are the standard medicine here. These flies seem to work slightly better if half the wing is burned away with a cigarette. The effect is a creation similar to the emerging midge pupa. It is fished just beneath the surface.

'We prefer to angle here with waders. It is necessary to stand in water three to four feet in depth to fish in the most productive spots. Plenty of warm clothing, such as the Woolrich hunting pants, is the order of the day.

A persistent east wind ruffled the pond and those who angle there in the crystal water cherish an irregular surface more than any other condition brought about by the elements.

For the first two hours we all enjoyed excellent midge wet fly fishing. In the main the rainbows occupied the channel and the browns concentrated in the little basin to the side. It was not difficult to get numerous "ticks" on the small artificials. Now and then a fish was hooked solidly and was either landed or lost in the vegetation. The better fish in the spring pond were working and a reasonable number were hooked. One pattern of fly seemed to be as effective as another within the small quill body range.

One by one we switched to 3x tippets in an effort to strengthen our tackle for the better fish. All of us had left a few flies sticking in trout. The heavier gut points proved to be sufficient camouflage in the disturbed but clear water. Trout were hooked and carefully released. Now and then someone creeled a particularly good one.

About 10 o'clock a fine looking drake or May-fly put in its appearance. As the emerging flies came to the surface and spread their wings they were blown across the ruffled water. This particular fly rode on the water for sometime before it could take wing.

The trout forsook the midges and turned on this larger mouthful in a most businesslike manner. In this country we carry dry flies with us right from the opening kickoff, and what is more, we are presented the opportunity to put them to use.

Having never seen this hatch before I

poked through the box to see if there might be anything there which would come close to it. A No. 16 Parson's Dun caught the eye. It was a new addition to the box and it found its way there because it was an attractive looking fellow as illustrated in Ray Bergman's book, "Trout." I can't resist the acquisition of new patterns, although I know full well such practice is not a necessity. This seems to make trouting just that much more fun.

In ten minutes the line was dried, greased and ready to go.

When the artificial hit on the water among the duns it looked all right. The size corresponded to the natural and the color was close; in fact at times it was difficult to distinguish the artificial from the natural.

It must have looked right to the trout too. They took it pretty well in spite of the great competition nature provided.

The water there is almost void of current. The fly was permitted to bob on the surface. If nothing happened in 5 or 10 seconds it was given a slight twitch on the theory that this might attract attention. If this did not bring a response the fly was dragged steadily across the surface, as we do in skater fishing, before it was picked off the water to be dried for another cast.

The notes record: the best method of fishing the dry was to employ a natural float over a feeder. Quite a bit of action, however, took place right after the fly was jerked or slightly twitched. Other fish took rather vicious passes when the fly was pulled across the surface. In the latter case the fish often made a lunge but did not connect.

A trout, which looked like a good one, rose several times. The Parson's Dun lit right (Continued on page 24)

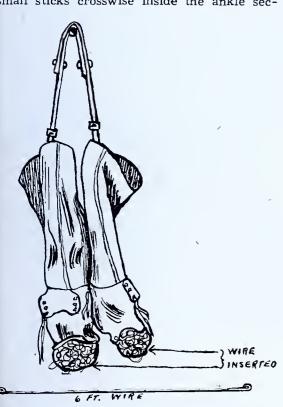
HOW TO DRY HIP BOOTS

MOST trout and bass fishermen are interested in safe methods for quickly drying out their wet hip boots.

Doubtless each nimrod has his own favorite method. Some fill the boots with sawdust or newspapers to absorb the moisture. Others use gadgets that force hot air through a tube into the inverted boot. Many, like myself, hang their boots up to dry, after having turned them in-side-out, thus exposing most of the damp inner lining to the air. My one difficulty was to thoroughly dry the "foot" part of the boot from the ankle down, as the boot, when in-side-out, often breaks at the ankle in such a manner as to close up the opening, thus cutting off the air circulation, with the result that the upper boot thoroughly dries while the ankle and foot sections do not.

It requires much foot twisting and tugging to finally force a foot into a damp boot, especially if the boot is fitted at the ankle.

Reasoning that this part of the boot also would dry if air could reach it, I placed two small sticks crosswise inside the ankle sec-



tion to hold it open. This helped some, but often the sticks closed most of the opening and cut off the air circulation. Finally I struck upon a simple idea which works fine and with the hope that it may help conserve your boots and your nerves and add to your fishing pleasure, I pass it along.

Turn your boots inside-out down to the heels.

Take a six foot piece of bailing wire for each boot and with a pair of pliers carefully turn under the sharp ends of each wire into a small loop to prevent piercing your boots. Starting at one end, twist the wire into four inch loops, tangling the loops in all directions and through each other until you have a wire ball of irregular loops and twists. Shape this ball in the palms of your hands until it snugly fits into the ankle part of your boot. The springiness of the wire will hold open the boot and permit the free

circulation of air into the foot of the boot.

Snap both boots together by their straps and hang up until dry. If hung in a warm dry place or in the sun you will be ready to take another trip next day. The accompanying crude drawing may illustrate my point

RALPH E. WALLEY, Secretary
Pennsylvania Division
Izaak Walton League of America
Wyomissing, Pennsylvania

Teacher: "Now Carol, what is a niche in a church?"

Carol: "Why, uh, it's just the same as an itch at home, only you can't scratch it as well."

"Boy, oh, boy, it's raining cats and dogs outside."

"You're telling me! When I was out I stepped in a poodle!"

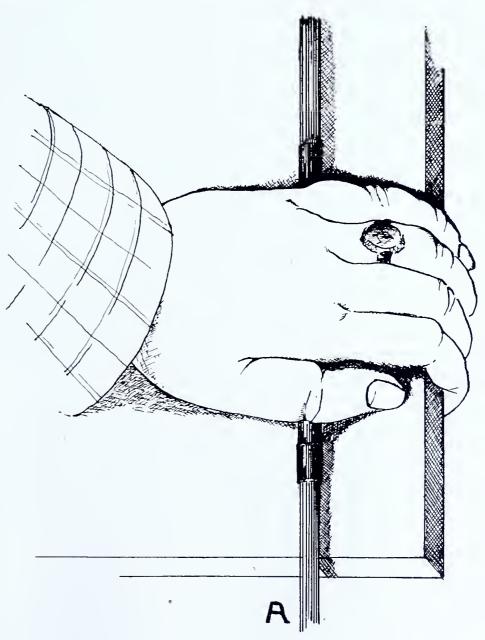
TAKING DOWN THE ROD

By CHARLES BIDDLECOMBE

Many good rods are ruined in taking them apart when the rods have tight fitting ferrules. The accompanying sketch illustrates my method of taking down a rod; which method I always use whenever possible; even when ferrules are moderately tight, and could be forced apart in the conventional manner. It will add years of life to the best rod, and when practiced a few times you will readily see the practicability of the idea. Here is how the idea works, and I have found no rod that was too tight to yield to this method.

Place the rod on edge of table, or board, or any place where a firm grip can be had on rod, as illustrated. Always start with heaviest section projecting over end of table: that is, if tip and middle section refuse to

part easily, lay tip section on table with guides on top, and grasp it with left hand as close to ferrule as possible. In doing this, the section is always held straight and firm. With right hand grasp larger section close to table, as at 'A' in sketch, and by pulling steadily, and not twisting, the ferrules will yield, and you will never use any other method in taking down a tight fitting rod. The damage to the rod immediately above ferrules which occurs when the ordinary methods are followed is eliminated in this procedure. Try this idea and you will not lose your religion the next time you have a rod that refuses to come apart. Your equipment will have added years of life, and your pleasure in this greatest of sports will likewise be increased.



REPORT OF THE STREAM AND WATER PURCHASE COMMITTEE OF THE PENNSYLVANIA FISH COMMISSION

POST-WAR PLANNING

In view of the fact that Governor Martin has appointed an executive director of the Post-War Planning Commission, and has repeatedly pledged his hearty cooperation in the work of improving and conserving the waters of our Commonwealth this report is herewith adopted by the Board of Fish Commissioners to assist in the formulation of plans, and to establish a guiding policy for the Fish Commission for the future when considering the purchase and improvement of waters for public use.

The following program also encompasses conservation work to assist in the rehabilitation of returning members of the armed forces by providing healthful outdoor work. Such work should be directed and planned in a practical manner so that it will benefit the average tax payer and licensed fisherman and be a monument to wise planning and good management.

It is to be understood that the Board of Fish Commissioners shall, at all times, cooperate fully with the: Post-War Planning Commission, the Game Commission, the Department of Forests and Waters, the Highway Department, the Department of Agriculture, and any other State sub-division, in bringing about additional recreational facilities and more food fish for the citizens of our Commonwealth.

After considerable study and effort to collect facts concerning the purchase and establishment of better fishing facilities in Pennsylvania, the Committee finds and recommends the following.

During the days of the depression money was made available to improve fish and game conditions, however, in many instances the plans necessary to take full advantage of these funds were far behind the funds made available.

Had time and effort been spent on plans before the funds were available the programs could have been more effective and more beneficial. Thus wise planning would have paid greater dividends in recreation as well as providing a more satisfactory supply of water in our lakes and streams. The right type of work will provide: additional recreational facilities, conserve soil, prevent floods, stop harmful erosion, protect the receding ground water table, and in a great measure prevent many of our streams from going dry as was the case during the past year.

Our recommendations are divided into three sections as follows:

- 1. Purchase and creation of lakes and ponds.
- 2. Creation of dams and purchase of warm water rivers and streams.
- 3. Purchase and improvement of trout waters.

In making these recommendations, the Board acknowledges the reports of the experiences of other States, that have through the past years successfully completed purchases and construction such as we recommend.

1. It is recommended that in sections of the State where there exists a large fishing population and very little water the Commissioner and his assistants make a survey of the geographical and biological conditions and wherever possible plans shall be made for the creation of lakes and the improvement of existing ponds so that every potential site where clean water, sufficient land and necessary surface and mineral rights can be obtained shall be catalogued. This cataloguing shall provide information to show that if created there will be a permanent supply of clean water and land around the water in sufficient amount so that nature can be preserved and admired while the lake is being used for fishing and other recreation. The Commission should own all the shore line of any lake created so that the use of the lake can be regulated for the benefit of the public. Proper survey and study of the mineral rights under any land and waters considered shall be made so that mining in the future will not damage or destroy any body of water created with on the recommendation of the Board of Fish Commissioners. If there is any doubt as to the supply of fresh water and its continued existence, biological tests should be made by competent biologists and when these tests show a quality of water that will support satisfactory amounts of fish life to make the investment a productive one, the Commissioner and the Board's employees shall assist in completing the plans for the lakes or pends so they shall be available for use by our Board or any other Board that shall cooperate in the creation of these new bodies of water. Particular attention should be given to the possibility of creating a dam or lake on a water supply that might be used for mining or coal washing in the future. Where this condition might exist in the future particular note of this fact should be covered in the plans so that unless there is some legal method of preventing mining that could destroy the dam and pollution therefrom being created and jeopardizing the investment then our Board shall not recommend such projects.

Our Commissioner and employees shall assist the Department of Agriculture and the Post-War Planning Commission in formulating plans to assist farmers and land owners in creating ponds, to provide additional water supply, and additional sources of food fish. Our employees shall create a pamphlet that will cover plans for construction of these ponds as well as facts concerning the stocking and maintaining of fish life and the treatment of the water with fertilizers and food to promote the growth of fish from year to year. Assistance in preparing this pamphlet should be obtained from outside sources such as the Fish and Wildlife Service of the U.S. Government and the Biological Department of State College, or other cooperating conservation Institutions where assistance is available.

After a thorough survey of the State

water sheds has been conducted by the Commissioner and employees it will be found that many sections of the State have a number of streams and rivers that can be included in the plans for Post-War Work.

2. There are a number of rivers and large streams where series of dams could be created to increase the amount of water available for use by the public. The Commissioner and employees shall survey these rivers and locate sites for practical dams. Contact shall be made with land owners so that the sites of the dams and a stretch of land adjoining each dam be purchased to provide free access to the water by the fishing public. If additional land control is necessary it is recommended that the Board's employees arrange to purchase fishing and trespass rights at a reasonable figure. The dams to be built shall be planned as an assistance to flood prevention and where additional fishing and trespass rights are purchased plantings of trees and protective vines shall be made to hold the banks in place. If necessary log and stone bank improvement shall be included in the plans to prevent erosion and to assist in soil conservation.

The Southeastern section of the State especially has a number of streams that as the result of floods and erosion have become full of silt and now have long stretches of very shallow water not beneficial to anyone. Where these warm water streams will support fish life and are free of pollution to a degree that is satisfactory all year around as proven by a survey, then it is recommended that our Commissioner and employees formulate plans for the improvement of these waters. The survey should contain sites for new dams, location of old dams to be reconstructed and suggestions for improvement work to make these streams more serviceable.

In all the suggestions for work on rivers and warm water streams, geological survey charts shall be prepared containing the location of improvements to be made in each water shed. A descriptive analysis shall be prepared covering the approximate costs of locations, the approximate cost of construction, and a complete description and analysis of the purpose and practicability from the standpoints of: recreation, fishing, flood prevention, soil conservation, the prevention of drought conditions and the possibilities of reforestation on any land to be acquired as the result of this work. Before such projects are approved the Board of Fish Commissioners shall review the data as collected and take action by vote at a meeting at which time each project shall be reviewed and approved or rejected, for recommendation to the Post-War Planning Commission.

3. It is recommended that the Commissioner and employees survey and prepare plans for the purchase and improvement of trout streams that will be within the following suggested specifications:

(Continued on page 21)

TO ALL ASSOCIATIONS

The past year was one fraught with many difficulties. The main thought of your Board has been to cooperate to the fullest extent with the war effort and at the same time endeavor to preserve those things which our fishermen cherish and for which so many thousands are fighting on our far flung battle fronts.

Those of us who remained at home found our fishing greatly curtailed by long hours of work, and with the serious shortage of gas we were unable to reach our favorite fishing grounds. It was with real regret that it became necessary to close the Spring Creek project within one week of its opening. The Board felt that in justice to all fishermen it was the only fair thing to do as gasoline rationing made it impossible for those living at a distance to fish the Project.

In order to be in a position to give fishermen definite information on gas rationing, contact was made with the Coordinator of Fisheries, United States Department of the Interior, as to whether fishermen could be given any preference. We were advised that since Pennsylvania was one of the sixteen eastern states under the ban it would not be possible for any of the local boards to increase gas for fishing. I am very happy to say the fishermen accepted the restricted fishing and like every other citizen cooperated in every way possible toward helping to win the war.

The fish food problem was a perplexing one for the first six months of the year. However, I am glad to report that through contact with large packers in the middle west we were able to secure sufficient food for our hatcheries. As most of you know, a considerable amount of the food used at the various hatcheries is frozen fish, and contracts have recently been completed which will assure an ample supply for the coming year.

Construction was at a standstill owing to priorities on the necessary materials. Fortunately, the plans for additions at the various plants were prepared so work could be discontinued without interfering with the production of any particular hatchery. There is a serious shortage of trained men and the labor turnover has been heavy. Many of the projects which had been in the making were set aside until after the war.

The transportation question is one which has seriously interfered with the distribution of fish. Our fleet consisted of 42 tank trucks during 1943. During the year 12 were taken from the service completely worn-out, which means we are starting our 1944 distribution with 30 trucks which have an average of 85,000 miles. This presents the Board with a real problem, but you can be assured we will do our best towards stocking the approved waters.

The following statement of distribution for 1943 will be of interest to all fishermen:

Species	Size	Number
Trout	7" to 20"	1,340,420
Trout (fingerling)		2,394,850
Bass	1" to 14"	604,026
Catfish	5" to 13"	267,956
Bream	3" to 8"	258,900
Frogs (Embyro)		360,300
Carp	10" to 20"	90,119
Yellow Perch	Adult	. 84,527
Suckers	3" to 5"	39,689
Minnows	1½" to 6"	38,348

Pickerel	7" to 18"	1,570
Calico Bass	7" to 11"	1,375
Pike Perch	Adult	290
Goldfish		97

In addition there were planted 68,875,000 Yellow Perch Fry; 27,308,000 Pike Perch Fry; and 18,928,000 White Fish Fry.

The distribution of takeable or legal size trout showed a total of 1,340,420, representing a weight of 202 tons. The distribution was somewhat below that of the previous year, but this difference was not due to the lack of fish at the hatcheries, as the difference between the output for the previous year and that of 1943, is being held over in reserve at the different trout plants.

This reserve, approximating 400,000 legal sized trout is being held pending the return of our boys in the service, and will help in building up a reserve to be placed in the streams during the adjustment period.

At the last meeting of the State Federation it was recommended that the law be amended so the Fish Commission could issue free hunting and fishing licenses to those in the Armed Forces.

Act No. 145 was approved by the Governor on May 21, 1943, providing that for the duration of the present war any person in the Armed Forces who has the necessary qualifications under the provisions of the Act shall be issued a fishing license free of charge upon application to any County Treasurer within the Commonwealth.

It was also recommended that the fish law be amended so the Commission could use discretionary power to close a trout stream stocked during the regular season for a period of five days, or any part thereof. Act No. 83 was approved by the Governor on May 6, 1943, providing that the Commission may close any stream which has been stocked with trout during the open season for trout, or any part thereof, to fishing for a period of any number of days not exceeding five days after the same has been stocked.

The law was also amended permitting taking of both perch and pickerel through the ice with not more than five tip-ups during the months of December and January (Sundays included).

The motor boat law was also amended permitting the Board to adopt appropriate rules and regulations governing the taking of fish by trolling. These regulations will be published sometime during the early spring.

Cooperation of Clubs and Associations

Many of the clubs and associations not only organized groups of junior conservationists to take over the projects formerly carried on, but also conducted campaigns to increase their membership. It has not been unusual for many of the groups to purchase fishing licenses in honor of those of their members who are in the armed forces.

In closing, we wish to pay tribute to the officers of the Federation, the various clubs and associations and the fishermen in general, and I personally want to extend my thanks, for the marvelous way in which they have conducted their affairs during such trying times.

Sincerely,
C. A. FRENCH,
Commissioner of Fisheries.

At the last regular meeting of the Federation held during the month of February, 1943, the following resolutions affecting the Fish Commission were presented. So you may know how they were disposed of, I am submitting herewith for the information of your members a short summary of the action taken.

RESOLUTION No. 1: That the cost of fishing license be increased fifty (50c) cents, the resulting fund to be used for stream improvement, mine sealing, building dams, lakes or ponds or acquiring same—acquisition and maintenance of public fishing waters.

DISPOSITION: A bill was introduced at the last session of the Legislature, passed the Senate and was referred to the Committee on Fisheries in the House. No action taken.

RESOLUTION No. 2: That the Fish Commission be permitted to expend funds for the enforcement of Pure Streams Law and the elimination of pollution.

DISPOSITION: No legislation was introduced on this subject and the only information available is an Opinion issued by the Attorney General which prohibits the Board from expending any of its monies for the enforcement of the Pure Streams Law or the elimination of pollution.

RESOLUTION No. 3: That the Fish Commission appoint a regular Fish Warden for every county.

DISPOSITION: During the last year several new wardens were appointed, and additional appointments will no doubt be made during the present year. One of the big problems of the Board has been the fact that many of the men have entered the Service and apparently it will be difficult to secure temporary help to carry on these districts until the end of the war, at which time the men formerly employed will be returned to their respective districts.

RESOLUTION No. 4: That the State Federation advocate and assist the Fish Commission in the creation of lakes and ponds, the stocking of these waters with large mouth bass, and the planting of shade trees around these areas.

DISPOSITION: Owing to the scarcity of materials and manpower all construction work was discontinued.

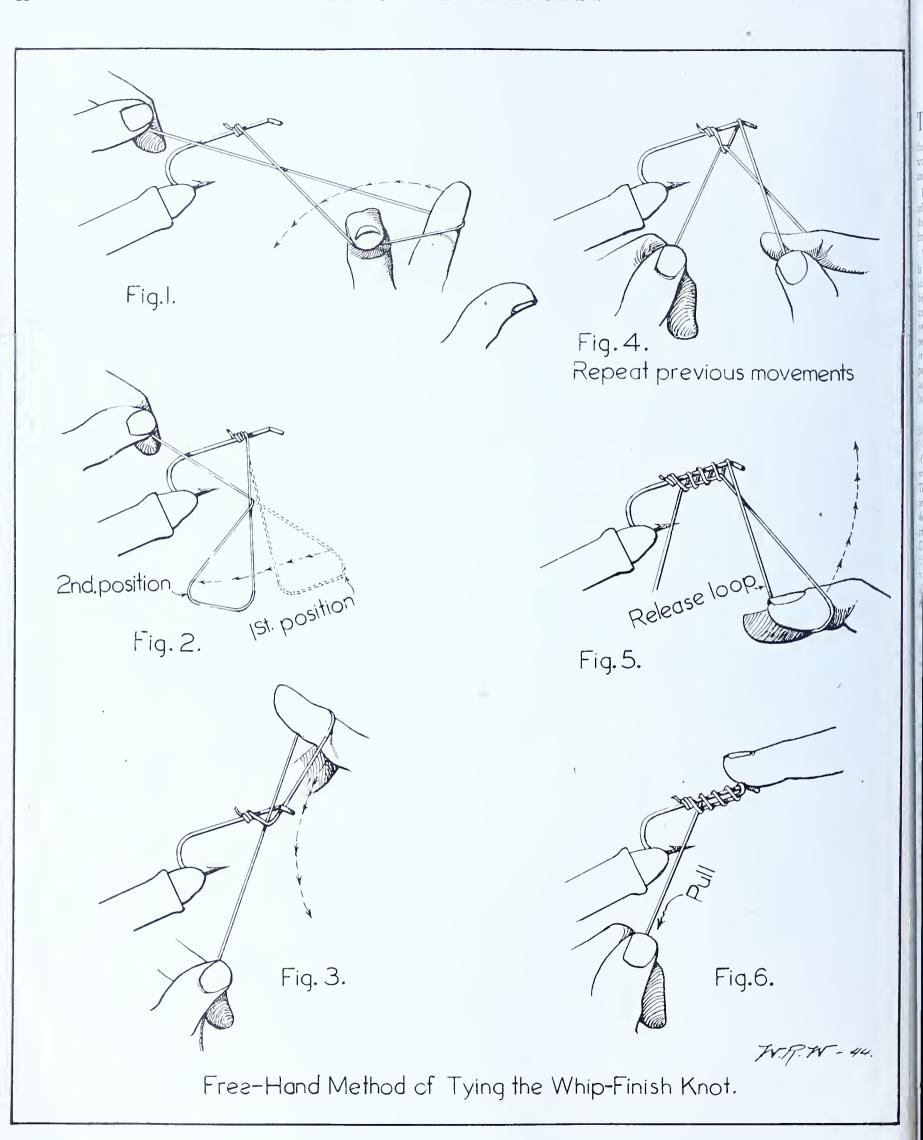
RESOLUTION No. 5: That the State Federation request the Fish Commission to resume the practice of netting fish from Lake Erie for stocking purposes.

DISPOSITION: This question has been given serious consideration by the Board, and it is expected that a plan will be worked out in the near future.

RESOLUTION No. 6: That the Fish Code be amended permitting the Fish Commission to use discretionary power to close a trout stream, which is stocked during the regular open trout season, for a period of five days, or any part thereof.

DISPOSITION: Act No. 83 was approved by the Governor on May 6, 1943, providing that the Commission may close any stream which has been stocked with trout during the open season for trout, or any part thereof, to fishing for a period of any

(Continued on page 22)



THIS BUSINESS OF TYING THE WHIP-FINISH

By W. R. WALTON

THE following discussion is intended not for expert fly tyers but for amateurs in the game and those fellows who, like the writer, have four thumbs on their right hands and five on their lefts.

Having thus discounted the sneers of the adept, and made a bid for the sympathy of the less skillful, let us now proceed to the fray.

The usual method of tying off a fly head is by use of an invisible fastening commonly called the "whip-finish," which leaves the bight or end of the tying thread secured and concealed under three or more of its own turns. It is the same fastening used in securing the windings of a fly rod. Its origin is lost in the dim mists of the hoary past but probably it is a nautical invention as are most of the knots commonly used by land lubbers.

I have not the slightest doubt that this fastening was known to the author of that famous fifteenth century work "The Treatyse of Fysshynge With an Angle" supposedly written by one Juliana Berners or Barnes. This, the first work of the kind in English, and the very first, I believe, in any language describing the tying of the artificial fly, was published in 1496, or only four years after Columbus discovered the West Indies. Although the language of the old girl is somewhat obsolescent there are easily recognizable, among the dozen flies described, such present favorites as the March brown, the stone fly and the yellow May.

But returning to our prime subject, some fly butchers are content to finish off the head with a double half hitch but this sloppy practice is likely to cause bitter grief on the stream by coming undone at critical moments.

There are numerous ways of tying the whip-finish and there is even offered for sale an instrument especially designed for accomplishing this operation mechanically. This is illustrated and discussed hereafter.

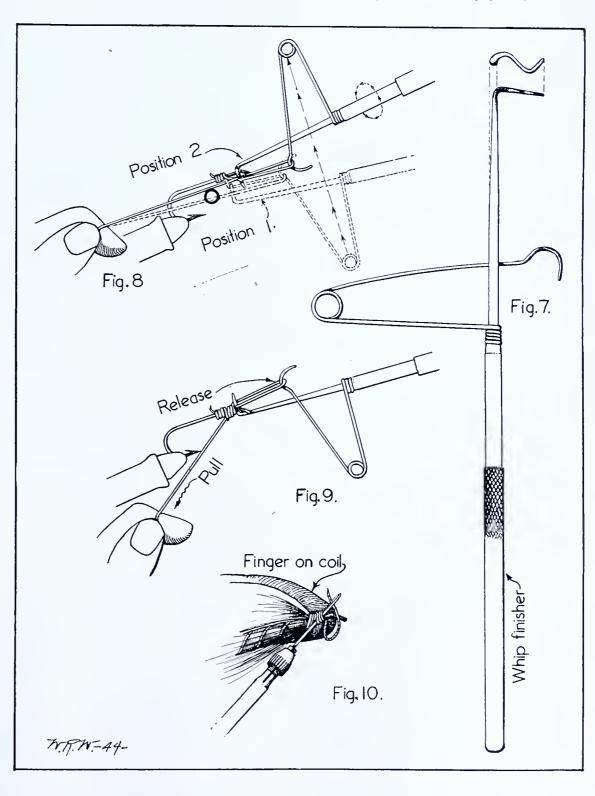
The free-hand method of tying the whipfinish, said to be commonly used by professional fly tyers, is illustrated in detail herewith in figures 1 to 6 inclusive. This, at first glance, might be imagined to furnish the simplest and quickest way of tying off. It is claimed that skillful operatives can tie this knot in from four to five seconds. Howbeit, and never-the-less, usually, as in my own illustrations, the tying thread is depicted as a cord, rather than a fine thread, in order to render its windings clearly visible and understandable. This is calculated to create the impression of ease in accomplishment that is distinctly misleading as one may discover in trying to follow this method for the first time. This is especially true when hooks as small as number 10 or smaller are used. In this case, the space available for tying the finishing knot often is infinitesmally small which renders the operation much more difficult. In the case of bass flies or large streamers, the tying off operation is a comparatively easy stunt which the beginner should tackle before attempting to tie the smaller trout flies. After the principle of the whip-finish is grasped,

it will be time to attempt these. In fact, the fellow who can tie a neat midge fly in proper pattern can be said to have arrived completely in the fly tying game. I say this advisedly and regardless of the period of time consumed in the operation, for, as in painting a picture, the final result obtained is what counts.

Now, as to the whip-finish instrument (Fig. 7), the method of using this is depicted in figures 8 and 9. The vendor of this instrument says; "The largest bass fly or a midge on No. 20 hook can be finished with equal facility and a practiced operator can readily make the tie in 5 seconds without touching the waxed thread if a bobbin needle is used." Mebbie so—as to the bobbin needle, it is indeed invaluable—but that is another story. This

is where my remarks about thumbs becomes apropos, for although this instrument works all right after you have learned to work it, this takes practice and acquired skill before this occurs. Figure 7 illustrates this weapon about natural size. It may be seen from this that its tip terminates in an S shaped tang that is bent at right angles to the long axis of the shaft or handle. The springy dingus, located near its middle, bears a hook which is first engaged with the tying thread as shown in figure 8, first position. It is most important to note that the tang is first slipped under the far side of the near thread loop with the concave side of the S in contact with the opposite side of the loop. At this time the tang must be kept away from the hook shank while the handle is

(Continued on page 24)



A FLING AT FLY CASTING

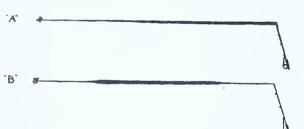
(Continued from page 9)

whether level or tapered are made in 30 yard lengths. The number of tapers that can be embodied in 90' of line are countless, and a great many fly casters make their own tapered lines by purchasing a good grade of "mill ends" in the various diameters and splicing them to suit their own personal wants. For further reference, see Fig. 2 which is a table of fly line calibrations.

This chart lists nine standard sizes of line which can be purchased today, and their corresponding diametric measurements in thousandths of an inch. By way of explanation, it might be said that there is no standardized method of manufacture used by the various line makers and an "E" level line made by one company might differ in diameter very noticeably from the same size line of another company. All veteran fly fishermen will agree that steps should be taken by all line manufacturers toward the adoption of a universal standard of calibrations in order to insure uniformity in line sizes.

In Fig. 1 (a) is illustrated the general outline of a single tapered line. The terminal end of this line is small in diameter for the

Fig. 4.



purpose of allowing the fly to light upon the water delicately and lightly. Let us assume that the first 6 feet of this line is size H or .025 of an inch in diameter. The line then graduates and becomes heavier toward the center and reel end until the maximum size or diameter is reached. If the line is known as a "DH" taper, the maximum diameter of the greater part of the line will be size D or .045 of an inch. Some fly casters prefer this type of line, but its adherents are few. The only real advantage is in the tapered end as an aid in presenting a fly with a minimum of splash, and rather than go to the expense of a single tapered line which ordinarily is not reversible so far as trout fishing is concerned, it might be well to make use of a good level line in a smaller size.

By far the majority of tapered lines in use today are the "double tapered" number. Fig. 1 (3) The same principle of fabrication applies to the manufacture of this line as the single taper with the advantage that both ends are tapered toward the "belly" or center of the line, thereby permitting the line to be reversed from time to time which actually gives the user two lines for the price of one.

In using either a single or double tapered line as it comes from the factory, the beginner may find that the end of the line plus the leader and fly will light upon the water in a tangled heap. This occurs when the force of the heavy body of the line is insufficient to straighten out the fine taper

FIG. 2

I	Н	G	F	E	D	С	В	Α
.022	.025	.030	.035	.040	.045	.050	.055	.060

plus the added weight of leader and fly, and can be eliminated by cutting off several inches of line at a time until the leader and fly can be forced ahead and straightened out by the heavier body of the line.

In discussing tapered lines, it would be impossible to avoid mention of the "torpedo head" or "bug" tapered line. This line is a comparatively recent development and a variance of opinion exists among the fly fishing fraternity as to its merits over other lines. As demonstrated in Fig. 3, the "torpedo head" taper is merely a level line with a short, large body or head built into the forward section. A line of this type weighs less than a double taper of corresponding length and permits the use of a shorter rod without sacrificing casting distance. If you possess a rod that seems a bit on the stiff side, try one of these lines with it, you will see a vast improvement in your rod action.

In order that the beginner may have a clear understanding as to the construction of these various tapered lines, refer to Fig. 4 which illustrates the sizes and footage of each used in their fabrication.

The beginner will find that the "torpedo head" line Fig. 4 (c) will leave little to be desired in the way of handling and performance. It will cause the beginner very little trouble during his early stages of learning. The heavy forward section of the line, once out beyond the rod tip, exerts a powerful pull on the thin "running" line behind it, which minimizes the effort necessary to secure distance in casting. It is also unsurpassed in casting large flies and bugs and can be used on a windy day very effectively. However, some disadvantages also exist. The heavy forward section (especially if size A or B) will not float to well. It is also ineffective on short casts since the heavy "belly" must be clear of the rod tip before the line can function properly. These two factors alone rule out the use of this line by experienced fly fishermen who are interested in delicacy of presentation, and short effective casts.

In summing up this discussion on the first two mentioned line improvements, namely improved finish and change in taper, bear in mind that we have limited our comments to the value of these improvements in relation to our ordinary present day fly lines which are fabricated of silk and oil, a combination of substances 30% heavier than water!

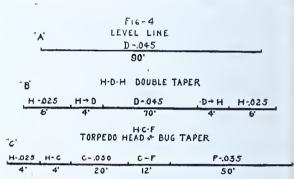
This leads us to the last and most outstanding of all the improvements made in our fly lines-the reduction of specific grav-

F16. 3.

ity. Now the term "specific gravity" may sound rather technical as applied to fly lines and fly casting, and might cause the beginner to wonder if this game isn't just a bit to complicated to bother with. But it's not so difficult as you might be led to believe. Specific gravity as mentioned in connection with fly lines can be defined as follows-the ratio of the mass of a body (in this case—a fly line) to the mass of an equal body of water at 4° Centigrade. For example, the specific gravity of gold is 19, and expresses the fact that, bulk for bulk, gold is nineteen times heavier than water.

MARCH

Now since oil and silk fly lines are 30% heavier than water, it is not difficult to see that their specific gravity is greater than that of water. A reduction of this specific gravity has been accomplished by the following two methods (1) the manufacture of lighter than water and (2) the use of nylon which is a substance lighter than silk, and having specific gravity nearly equal to that of water. The dry fly fisherman will certainly want to investigate the potentialities of the hollow core line. It's guaranteed to float high and dry under any conditions, and if some of my fly fishing friends can't be found on the more tranquil stretches of their pet trout streams, I'll surmise that they have



invested in this line, and will start for the nearest fast, rough riffle. The nylon line, although not as buoyant as the "hollow core," is nevertheless a distinct improvement over our present oil and silk lines, and should be well worth their price.

By this time, the beginner may wonder what all this dissertation has to do with getting "stung" on tackle. As the old saying goes, "You only get what you pay for." It is natural that the market would be flooded with inferior tackle, when you stop to think of the money that is invested annually by fishermen over the nation. When you are ill, you don't call a mechanic, you call a doctor. Why then, buy tackle from any other sources than a reputable tackle manufacturing concern? It may cost a bit more originally but you can bet that your investment is a good one.

To the would be flycaster, a level line of good quality is certainly recommended in preference to a cheap, poorly finished tapered line. One of the State's ace dry fly fishermen, Haas Lose of Bellefonte will argue in defense of the level line anytime. If you desire to invest a little more money, get a tapered line, but get a good one. And as previously mentioned, the torpedo head, which is the most expensive, is recommended for beginners and veterans alike.

But whatever equipment you buy, don't do as yours truly did in the beginningdon't invest your money in "wildcat prod-

(Continued on page 24)

CLOVER CREEK IN BLAIR COUNTY

By DET

One seldom reads the Angler without reading the praises of some of our great trout streams of which we have many. Seldom if ever do we read of Blair County as a section that affords good trouting.

After putting plenty of miles on the old gas buggy in past years in quest of better fishing and the super trout stream, it took gas rationing of the past season to force the realization on some of us that residents of Blair are far better off than we have ever known or wished to admit.

The larger trout streams: Clover Creek, Pinny Creek and Cannoe Creek are all within rather easy reach of most of our trouters and afford a representative picture of anything the State has to offer in the way of trout waters.

While the Frankstown Branch of the Juniata River isn't listed as a trout stream, many large trout are taken each year at or near the confluence of any of our trout streams, all of which flow into this water.

Many large cannibals migrate to the river where the food supply is unlimited and the larger water make them a real challenge to the boys who go for a large trout with no holds barred.

To these boys numbers of fish taken mean little, a really good one is their whole mission in angling. A good many spend whole seasons on this water.

Let's have a look at Clover Creek, the larger and probably the best of the trout streams in Blair County. Sixteen miles of fishable water, starting at Fredericksburg and flowing through farm lands for the most part it empties into the Juniata River near Cove Forge.

From a number of feeder streams rising from deep seated springs on Tussey Mountain, Clover Creek has a constant flow of good cool water, that very seldom freezes even in cold weather.

With more than her share of crawfish and large numbers of minnows it is ideal for the hold-over fish.

Some very fine species of brown trout have been taken from this stream and it is well within its power to produce a record fish one of these years.

A twenty-four and one half incher was tops for 1943. While this is a good fish, the Creek has produced trout of 27 inches and 32 inches in the past. The larger was found by a young fellow who was hunting. Coming down to the creek to cross, he saw this fish lodged against a log. He took it to a near by farm house to measure it but failed to get its weight.

The upper reaches are formed pretty well to the banks of the stream, as a result erosion of soil is great. It muddies easily and the run off is rather slow, making it ideal for good bait fishing during rainy seasons.

With the coming of normal conditions and clear water the fly fisherman finds most of the fly hatches common to the waters of Pennsylvania.

Fine hatches of shad flies appear a few days before or after Decoration day and continue from a week to ten days. This is the same fly that appears on Spring and Penns Creeks and compares well in number

(Continued on page 23)

REGULAR FISH WARDENS

NAME	ADDRESS	TELEPHONE
Ahrens, Julius	Star Route #3, Oil City, Venango Co.	2676-R
Bachman, Floyd	49 Broad St., Stroudsburg, Monroe Co.	449
Bailey, Ross C.	230 W. Main St., Youngsville, Warren Co.	2-2181
Banning, James H.	Connellsville, Fayette Co.	946
Bidelspacher, C. A.	302 E. Third St., Williamsport, 18, Lyc. Co.	2-4561
Brink, Frank	Milford, Pike Co.	108
Chrisman, R. J.	Kushequa, McKean Co.	Mt. Jewett 464
Cloos, Leland E.	Middlebury Center, Tioga Co.	25-R-11
Close, L. E.	R F D #2, Emporium, Cameron Co.	6931
Cole, Harry Z.	877 Cherry St., Norristown, Montgomery Co.	2335
Dahlgren, David	Philipsburg, Centre Co.	317
Davis, Dean R.	922 W. Mahoning St., Punxsutawney, Jeff. Co.	1048-M
Greener, Robert M.	445 E. Strawberry St., Lancaster, Lanc. Co.	2-8603
Hahn, Edwin	138 Myrtle St., Erie, Erie Co.	C-58-115
Harter, Keith	Dalton, Lackawanna Co.	100
	E. Tioga St., Tunkhannock, Wyoming Co.	5592
Henderson, S. F.	R F D #7, Greensburg, Westmoreland Co.	2684
Hill, Rayel	Bowmanstown, Carbon Co.	Palmerton 422
man, Clifton	Evans City, Butler Co.	3552
ames, George H.	65 E. Louther St., Carlisle, Cumberland Co.	708
Johnson, J. Albert	12 Hobson Place, Bradford, McKean Co.	4362
Jones, Minter C.	238 W. Garrett St., Somerset, Somerset Co.	347
Lech, Anthony J.	420 Hess St., Schuylkill Haven, Schuylkill Co.	566
Lender, Lincoln	Bellwood, Blair Co.	2981
Litwhiler, Charles	Numidia, Columbia Co.	
Long, C. V.	East Waterford, Juniata Co.	Blain 5-R-5
Neff, Harvey D.	436 S. 18th St., Allentown, Lehigh Co.	7063
Voll, G. Max	2 Church St., Montrose, Susquehanna Co.	149-M
Voll, Leroy	Pleasant Mount, Wayne Co.	Hatchery
Ogden, John S.	520 Girard Ave., York, York Co.	7434
Pyle, Horace A.	R F D #2, Coatesville, Chester Co.	817-J-2
Rice, Edward L.	248 W. Green St., Waynesburg, Greene Co.	191-L
Schadt, John A., Jr.	Lake Ariel, Wayne Co.	2051
Sheldon, S. Carlyle	Conneautville, Crawford Co.	125-B
Snyder, Arthur S.	R F D #1, Mifflinburg, Union Co.	6-220
Weber, Walter	2300 S. Shore Drive, Erie, Erie Co.	2-2965
Wensel, Charles	Clarion, Clarion Co.	91-W
Wertz, Carl	221 E. Horner St., Ebensburg, Cambria Co.	158
White, Clinton B.	445 W. Neshannock Ave., New Wilmington, Law. Co	
Wilcox, Paul D.	Canton, Bradford Co.	163-R-11
Womelsdorf, R. J.	241 Pierce St., Kingston, Luzerne Co.	W-Barre 7-583
	PIL I TOTO DO, INTERSOUTE LUCCITIC CO.	11 - Datte 1-904

FISH STOCKED IN THE WATERS OF PENNSYLVANIA—1943

Brook, brown and rainbow trout	7 " to 20"	1,340,420	
Black bass	1 " to 14"	604,026	
Catfish	5 " to 13"	267,956	
Bream	3 " to 8"	258,900	
Frogs (Embryo)		360,300	
Carp	10 " to 20"	90,119	
Yellow perch	Adult	84,527	
Suckers	3 " to 5"	39,689	
Minnows	$1\frac{1}{2}$ " to 6"	38,348	
Pickerel	7 " to 18"	1,570	
Calico bass	7 " to 11"	1,375	
Pike perch	Adult	290	
Goldfish		97	
			3.087.617
Trout fingerlings		2,394,850	_,,_
	Fry	68,875,000	
Yellow perch			
Pike perch	Fry	27,308,000	
White fish	\mathbf{Fry}	18,928,000	
			117,505,850
Grand total			120,593,467
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

MURDER

(Continued from page 3)

the "fight" out of his fish at a rate slow enough not to endanger his leader. His task was to keep from arousing the fish to a resistance greater than his presumably worn 5x gut would stand.

It seemed as if it were hopeless, for the big trout continued to circle the eddy, swimming deep and strongly against the rod's light, steady tension, which relaxed only when the fish passed the gateway of the stream below. Around and around it went, and then at last it left the eddy. Yet it did not dart into the outflowing current, but headed into deep water close to the far bank. I held my breath, for over there was a tangle of roots and I could imagine what a labyrinth they must make under the surface. Ah! It was moving toward the roots. Now what would George do-hold the fish tightly and break off; check it and arouse its fury; or perhaps splash a stone in front of it to turn it back?

He did none of these things, but instead slackened off until his line sagged in a catenary curve to the water. The fish kept on until I could see the leader draw on the surface of the water as it swam into the mass of roots. Now George dropped his point until the rod was almost flat on the water, and delicately drew on the line until the tip flexed. Then he pulled on it several times, ever so lightly, to feel whether his leader was against a root or ran directly to the fish. It was not fouled, so he put on the lightest of steady pulls and lapsed into immobility.

I glanced at my wrist watch, slowly bent my head until I could light my cold pipe without raising my hand, and then relaxed on my stone. My smoke drifted lazily upstream, the separate puffs merging into a thin haze which dissipated itself imperceptibly. A bird moved on the bank. But the only really living thing was the stream, which rippled a bit as it divided around George's body and continually moved a slack loop of his yellow line in the disturbed current behind him.

When the trout finally swam back quietly out of the hole among the roots, a glance at my wrist watch showed that he had been in there almost an hour and a quarter. George slackened his line and released a breath which he apparently had been holding all that while. The fish re-entered the eddy and resumed its interminable circling. The sun, which had been on my face, dropped behind a tree and I noted how the shadows were lengthening.

Then we saw the big trout for the first time. As it moved away from us it came up toward the surface until its dorsel fin and the curve of its back showed, and then the edge of its great tail as it headed down again; it seemed two feet long. Again its tail swirled under the surface, puddling the water as it swam strongly and deliberately.

Then it came around to our side of the eddy and I thought that we would lose it, for it wallowed an instant and then headed down toward us. Instantly George relaxed the rod until the line hung limp; he seemed to grow even more tense, and from the side of his mouth he muttered "Steady!" I froze also.

Down the stream, passing George so closely

that he could have hit it with his tip, drifted a long, dark bulk, oaring along deliberately with its powerful tail in the smooth current. I could see the gray fly in the corner of its mouth and the leader hanging in a curve below its belly, then the yellow line floating behind as George fed it out through the guides of the rod, which now pointed downstream.

Delicately George drew in slack, felt the fish, determined that it was no longer moving. Again his rod drew back and the tip arched as he resumed his light pressure. The fish swam aimlessly around in the still water below us. The sun was half below the horizon now, and the shadows of the trees covered us and slanted down toward the stillwater. In the cool, diffused light the lines on George's face from mouth to nostril were deeply cut and the crafty folds at the outer corners of his lids hooded his eyes. His rod hand shook with a fine tremor.

The fish broke, wallowing, but George dropped his rod instantly flat to the water so that its bend was horizontal instead of vertical, as he let slip a little line. It wallowed again, then swam more slowly in a large circle. It was moving just under the surface now, its mouth open and its back breaking the surface every few feet, and it seemed to be half turned on its side. Still George did not move, except for the small gestures of taking or giving line, raising or lowering his tip.

It was in the ruddy afterglow that the fish finally came to the top, beating its tail in a subdued rhythm. I crept ashore, bent double, and ran through the bushes to the edge of the stillwater, downstream from where the fish was flapping, broad on its side. Stretching prone on the bank, I extended my net at arm's length and held it flat on the bottom, in a foot of water.

George began to slip out line slowly. The trout, beaten now, moved feebly as the slow current carried it down. Now it was opposite me and I nodded a signal to George. He moved his rod until its tip extended toward my bank and cautiously checked his line. The current swung the trout toward me and it passed over my net. I raised the rim swiftly and the next instant the trout was doubled up in my deep-bellied net and I was holding the top shut with both hands to keep it from jumping out. It galvanized into a furious flurry, splashing water into my face as I strove to get my feet under me to rise.

George picked his way slowly down the riffle toward me, reeling up slack as he came, stumbling and slipping on the stones as a man does when he is utterly weary. I rapped the trout on the head with my pliers and laid it on the grass as George came up beside me. He stood watching it, with shoulders sagging and head bent, for a long time.

"To die like that!" he said, as if thinking aloud. "Murdered—nagged to death! He never knew he was fighting for his life until he was in the net. He had strength and courage enough to beat the pair of us. But we robbed him, a little at a time, until we got him where we wanted him. And then knocked him on the head. I wish you had let him go."

The twilight fishing, out favorite time,

was still ahead of us, but he started for the car and I made no demur. We began to take off our wet shoes and waders.

"That's just what this damn depression is doing to me!" he burst out suddenly, as he struggled with a shoe lace. "Nickeling me to death! And I'm up here fishing, taking two days off in the middle of the week, instead of doing something about it. C'mon you; hurry up! I'm going to catch the midnight for Pittsburgh. I know a guy I bet I can get a contract out of!"

And sure enough, it turned out that he

APRIL-FOOLING THE TROUT

(Continued from page 2)

set of problems. Thus a day goes by pretty fast before we can solve enough problems to have a really big day with the trout.

Most fellows don't fish alone, they are with one or more sidekicks who, in general, fish about the same way as they do. One of the quickest ways of solving the problem of when to use a certain type of lure is to organize your group and each one use a different type until the lucky one produces results. In this way, a great deal of wasted effort is avoided and better results secured over the day.

Let's turn to the flies on the cover. First we have big lures—bucktails, marabous and streamers. They are for big waters, fast waters, and deep waters, or discolored waters. Their value lies in the fact that they represent big food, they make a bigger disturbance in the water to call attention, they are easier to see (by the fish), they can be fished on top or deep down, and they can be used on heavy leaders and will hold big fish.

Their disadvantages lie in the fact they are too heavy for light tackle, therefore heavy tackle should be used. They are clumsy to cast unless the tackle is heavy enough to balance them. Such tackle is usually too heavy for small lures and is much more tiring to use over a full day's fishing. Their ability to take big trout more than overbalances this discomfort. However, in waters containing small trout, they have little value except to stir up the trout and bring them up where smaller flies will take them.

The middle-sized lures, such as the optic bucktails represent, are my favorites during the opening days unless fishing special waters, such as Boiling Springs, where water conditions remain pretty constant throughout the year. It has been my experience, in Pennsylvania waters, that two color types of wet flies are predominantly on top. One is yellow, the other a rusty or reddish colored type. That seems true in wet flies, nymphs and bucktails or marabous.

Invariably, a number of us fellows start the season with one of this size flies if the water is the least bit high, fast or discolored. They are a happy medium between the big lures and regular wet flies. They handle well on light tackle, even on leaders tapered down to 2X. When it comes time to use smaller flies, the addition of a smaller tippet or two on the leader, and our light rods are ideal for easy casting and more feel of the fish, once it is hooked. Only in unusually heavy waters do I resort to the big lures. These smaller ones are attractive to big and

small trout and not too big for trout as small as 8 or 9 inches.

Next we come to that limitless number of styles of wet flies and nymphs, ranging in size from a 6 hook down to a 12 hook, and a second group from 14's down to 22's. This last group of tiny flies are for special use in particular types of water which are found more in Pennsylvania waters than any others that I have fished. The limestone streams and springs—quiet waters or slowly moving ones where small insect life grows abundantly, are best.

The regular-sized wet flies and nymphs are, of course, the best known and most extensively used. They are effective even in many big waters, especially when the trout are up looking for food or where it is possible to get them down to bottom feeders. For deeper fishing in fairly heavy water, I tie a special fly on a heavy hook, using a small body and wings, similar to the coachman shown in the middle of the group of wet flies. I have found this type of fly very good in both Pennsylvania and New York waters. It is a good transition fly between the small bucktails and the small wets.

On the cover, I have also pictured a small spinner, a worm and a minnow. There are times when they are the most effective lure to be used, for those who do not mind the trouble and effort it takes to use them. However, over the years during which I have fished April streams in Pennsylvania, I have not experienced even one opening day when our wet flies did not take more trout than the live bait. Being essentially lazy, I prefer the easier methods, especially when more trout are to be caught by those methods. I believe it is more important to know where to fish a lure than how to fish it. Not that the "how" is not important—it is. But, no difference how well a lure is handled, it will avail one nothing if it isn't fished where the trout are or where it can be seen.

Over a period of years, one develops what we like to call "fish sense." In other words, given a certain stretch of water, one looks at it and says, to himself or out loud—that's where a good trout should be. He has a feeling that, were he a trout, that's where he would live in that particular stretch of water.

If you don't have that feeling, it's hard to tell you in so many words just what to look for. However, here are a few of the more obvious places.

In high waters, trout are apt to hug the anks or any spot where the steady rush of he water is broken. Fish love the line where the swift current and back eddy join. Others choose the middle of the runs, usually where a slick on the surface tells of the presence of a rock or other obstruction near he bottom which offers a retreat for the rout. Most trout lie in the sheltered back current and dart forth into the swift water o snatch passing food. So fast are they on he return that many a leader snaps at the eye of the hook or is cut on a rock's edge efore the angler has time to respond to he strike. Fine leaders are no good under hese conditions. Boy-what a thrill when uch a fish hits the old fly! If he is missed, e was a big baby—if caught, he shrinks apidly when out of the fast waters. In nedium waters, always fish the head, sides nd tails of pools, during which time the fly

will also pass through the middle. Pay particular attention to rocks and such cover. Fish on top, the bottom, and in between, until you find where the feeding table is located.

Even when you know where the table is, it's hard to please those epicureans. Some days they haughtily disregard all your menu unless it is served in a style to which they're not accustomed. At other times, they are just plain folks, not fussy about what or how they are served, just so long as it is served where they can reach it.

Methods of presenting the lures to trout, while numerous, can be grouped into a few general techniques for each type of fly. Every fisherman develops his own peculiar way of fishing, based on these general methods. It has already taken years and volumes to write about all the variations and individual tricks of the trade by the so-called experts of this and past generations. Yet, upon analysis, they all boil down to the same basic principles.

One way of determining how to fish a lure is to visualize the actions of the live food it is supposed to represent. Let's take the bucktails, streamers and such lures. They become, in the water, minnows or newts or some similar type of trout food. To properly present such flies, one should decide or study how the live food acts.

Under certain conditions, minnows skip over the surface or close to the top, especially when chased by a gourmand. Therefore, one effective way to handle such flies is to cast so that it may be made to skip over the surface of the water. Personally, I like to cast them quarteringly across and downstream and make them skim the ripples on the heavy waters as they swing around downstream, then, with fast jerks, retrieve them up the current.

Again, minnows will lie near the surface, usually close to the bank, and dart about when a big fish approaches. Usually they do so in spurts, often hesitating in the current and then going across the stream to other cover. Thus, a bucktail or streamer cast over to the bank and jerked around under water, allowed to wait an instant and go with the current, then brought across in jerks, gives a pretty good imitation of the minnow.

There are times when minnows or newts or big nymphs hang suspended in the current, tails waving while the body weaves back and forth in the swift water. That's what the big lures will do if held steady down the current and the rod is slowly moved from side to side. Retrieving line makes the lure swim upstream, letting it out makes the lure act like the live food dropping back downstream. Playing a fly over a good spot in this manner very often entices a stubborn trout to come up and take hold.

Wet flies, of course, resemble insect life in the waters. One should learn what insects inhabit the waters he is fishing if best results are to be obtained. However, one or two methods of presenting the wet flies seem to hold good in most waters. One method, which surely does not represent any possible action of insects, is univerally practiced. That is to cast the wet fly, either one, two or three on the leader, across and downstream and yank it over the surface of the water, or just under the surface. No insect

could possibly act the way those flies travel, vet the trout take them.

The same type of cast, fished very slowly and with tiny jerks, is extra successful. Whether or no it is because insects also swim that way, it is hard to say. All I know is that I receive good returns from such handling of my flies.

Very often best results are obtained by allowing a wet fly to float with the current without any action from the rod. Maybe the fly looks like an easy catch for the trout, or goes deeper. When cast upstream and allowed to come down freely, the fly does go deeper and often reaches fish that otherwise would not see it.

In quiet waters, I have always had better luck when my fly is allowed to sink before given a very slow and short-jerked retrieve. This is especially true when the very small flies are used.

With small flies, the leader is important. I always use the finest possible tippet with each fly. A 4X tippet is best with any fly not bigger than size 14. A 5X tip is better when the fly is smaller than a 16. To use such a leader, one must also use a very light rod or one with a soft action tip.

Lest we forget, the use of wet lures is not the only way to April-fool the trout. Many are taken on the dry fly, even on opening day. Over the last six years, I have taken trout in the Yellow Breeches on the dryfly before the first week of the season was over. A couple of times, on opening day; often on the second or third day.

After all is said and done, why do I spend time writing about trout while the snowstorm rages outside? And why do you read it? Might as well ask why do we eat and sleep.

The snows on the mountains today will be the murmuring trout waters in April. Theychill us now, they will make us cold then. But, oh—what a difference! Our bodies may quiver, our legs shake and our hands be blue and stiff, but inside there will be a contented, glowing warmth.

Can't you just feel those waters pulling your legs in April? And can't you visualize the April-fool jokes you hope to pull on the trout? That snow outside isn't so bad, after all, is it?

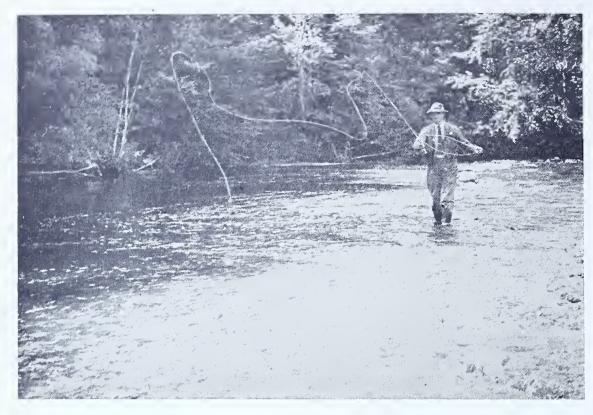
Where's my fly-tying box? I've got to tie another April-fooler!

Line Leak, Coats Creek With Oil

Ten Mile Creek was coated with a film of East Texas oil as the result of a break in a Southwest Pennsylvania Pipe Line Company line where it crosses the creek near the Manufacturers Light and Heat Company compressing station west of Waynesburg, and sportsmen were fearful it might cause wholesale destruction of fish in the stream below Waynesburg.

The line, which carries the thick gummy oil from the East Texas fields, sprung a leak while the creek was frozen over and the heavy oil was congealed into the ice and kept from passing down the stream. When the ice melted during the last few warm days, however, the oil started to move down the stream and yesterday the creek was coated with the substance from the Manufacturers plant to below Morrisville. The leak was repaired before the thaw started the oil down the stream.

Waynesburg Messenger,



Forehand position of the curve cast.

FLY CASTING THE EASY WAY

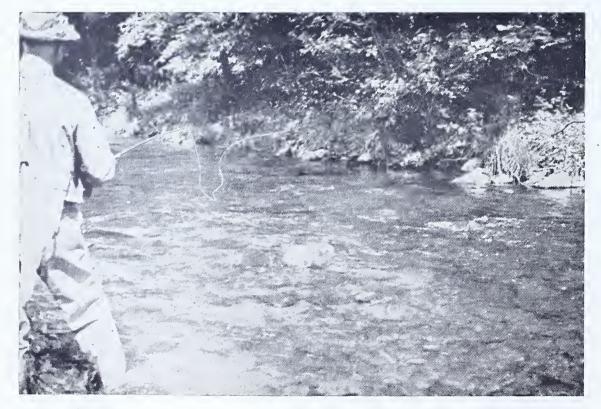
(Continued from page 5)

To place a fly on the water after it has been dried by false casting, you should pause at the "one o'clock" position, regain the proper timing by allowing the line to extend itself fully to the rear, and then make the final or power cast which will place the fly where you want it to go, and do it with decision and accuracy. Remember this and you will have little trouble with your dry-fly casting; forget it and you are bound to be in difficulties sooner or later. You can't disregard sound timing and cast in comfort.

The "Bow."

By the "bow" is meant the distance between the top and bottom of the bend in the line as it curls out on its forward or rearward journey. The ability to regulate the span of the bow is an exceedingly useful asset to the dry-fly angler. This knowledge is necessary to enable the angler to throw the right and left curve casts that often spell the difference between success and failure in dry-fly fishing. The caster should be able to vary, at will, the span of the bow, from one or two feet of the tight bow to a wide, rounded loop of ten or twelve feet of the wide bow.

To "tighten" or "flatten" the bow, the simplest way is as follows: Toss the back cast high, as usual, following through with the rod tip and extending the casting arm up and back with the cast. As the line travels back, lower the elbow, to bring the rod tip level with the line as it drops, thus permitting direct application of power to



Forehand negative curve cast.

the forward cast. When making the forward cast, apply a little extra power and throw in the tip smartly at the finish. Don't overemphasize the final flip of the tip, or throw it in too late, as this sometimes will cause the fly to come through too low and foul the lower line of the bow as it passes.

The wide bow is executed with entirely different technique. Instead of the usual high back cast, the back cast should be thrown about parallel to the surface of the water. Follow through somewhat with the rod tip, but do not raise the hand and arm with the pick-up. Instead of the usual pause, the timing can be hurried slightly. Apply barely enough power to the forward cast to propel it forward, using only the middle rod for the application of power, without the final "throwing in" of the tip at the finish. This method will produce an extremely wide bow which can be modified to suit the needs of the caster as soon as he masters the fundamental maneuver.

Curve Casts.

In dry-fly fishing, it is always desirable to have the fly come to the fish without first having the leader and line drift over him. When you are fishing upstream, the curve cast will place your fly to one side or the other of the leader and line, permitting it to drift to the fish without interference or preliminary warning.

Positive Curve Casts.

A positive curve cast is one that curves away from the casting hand. In other words, if you are a right-handed caster, the forehand positive curve is one that curves to the left—away from the casting hand. A backhand positive curve is one that curves to the right—still away from the casting hand, as that hand is held to the left of the body when a backhand cast is thrown.

To throw a forehand positive curve, the rod should move through a plane that is about forty-five degrees to the right of the perpendicular. Using a high back cast, throw a tight forward bow with plenty of extra power, and aim the cast at a spot not less than three or four feet above and to the right of your target. When the fly reaches the end of its forward journey, raise the rod tip slightly to aid in checking the forward motion of the line, and the extra power will cause the fly to snap around to the left, leaving the leader in an upstream curve and the line well to the right of the fly's line of drift.

The backhand positive curve is thrown exactly the same as the forehand, except that it is thrown to curve to the right and, therefore, must be aimed above and to the *left* of the target.

Negative Curve Casts.

A negative curve cast is one that curves toward, or on the same side as, the casting hand. It sometimes happens that lack of space for a back cast will prevent throwing a positive curve cast. With spiders, variants, or palmers, the air resistance is so great as compared to their weight that it is almost impossible to snap them around into positive curves. In either case, negative curves can be used. They are just as effective and in some cases serve the purpose better that positive curves.

To execute the forehand, negative curve cast, the back cast should be tossed with the rod moving in a plane that is almost

parallel with the surface of the water. In common with the positive curves, as the line travels to the rear, follow through with the rod tip until it points in the direction of the back cast. Do not, however, extend the casting arm; allow the elbow to remain comfortably at the side. When making the forward cast, apply the power with the middle rod only, leaving the tip out of the cast so that it merely follows through with the line instead of lending any power. Only enough power should be used in the cast to start the line forward; not enough to enable it to straighten out completely at the end of its forward journey. The result is a half-hearted affair, with a wide bow, which falls to the surface of the stream in the curve of the bow-in reality an incomplete forward cast. The cast must, of course, be aimed well to the left of the target and fairly close to the water so that it will not travel too far. If, as you make the cast, you find that you have applied too much power, the cast can be "killed" by following through with the rod tip, meanwhile feeding slack line out through the guides.

Ability to throw positive and negative curves, either forehand or backhand, enables the caster to use a curve cast regardless of the style of fly he may be using. For those flies that have little air resistence, use the positive curves; for the big flies—spiders and such—use the negative curves. Also, if back-cast space happens to be limited on, say, the forehand side, the anglar can use the backhand curves to place the fly where he wants it to go.

(To be continued)

REPORT OF COMMITTEE

(Continued from page 12)

1. The supply of water shall be clean and unpolluted all year, and after surveys are conducted by competent biologists it shall be classed as a stream that at all times shall produce enough natural food to maintain 500 legal trout per mile.

2. The streams considered and approved shall only be those that will re-produce naturally: brook, brown, or rainbow trout. Existing year around water temperature studies coupled with practical stream surveys giving water flowage volume in the summer and fall in the dry seasons will assist in determining and classifying the streams that should be included in those recom-

mended for this type of work.

3. Streams that have the other qualifications shall also have a stretch of stream of at least five miles in length. This length of stream as a minimum shall be considered eligible to be included in a stream purchase and improvement program. The program can be laid out for the complete length found satisfactory and as in other States, those sections of stream that can be secured from the owners can be improved at the start of the project. As these projects are continued it has been found from experience of Commissions in other States that many of the backward land owners will be glad to cooperate and will further facilitate the completion of these projects. From time to time the work can be extended and further completed so that eventually all the desirable water in each approved water shed will be improved and made available to public use.

The waters that will come into these classi-

fications shall be set up by water sheds on a geological survey type of map. These maps shall be plotted to show the land owners' names and approximate boundaries. An enlarged map shall be made showing spots for construction of stream improvement in the form of pool digging dams, log and stone shoring on the banks to prevent erosion and flood destruction. Surveys should be conducted to establish locations for barrier dams to be erected to prevent the migration of warm water fish that are competitive when large in size to all species of trout. These sites should be shown on maps covering stream data and improvement. After such data as described above is compiled, then steps shall be taken to acquire these lands and waters.

The procedure and policies as experienced in New York State and outlined herewith are those that the Pennsylvania Board of Fish Commissioners should adopt and the regulations and restrictions to apply to these lands and waters should be the same as developed in New York State.

NEW YORK STATE TROUT STREAM PURCHASE AND IMPROVEMENT PROGRAM

The opinion of the department, that the right kind of stream development work, because of its value in controlling bank erosion and lessoning flood damage, would be a major factor in selling the program to the landowners, has been proved correct; and on many units the department is continually under pressure from landowners for the construction of stream development devices on their properties. This situation is particularly true where streams run through good agricultural lands.

The acquisition procedure consists in securing an agreement from the landowners for the conveyance by warranty deed, after examination and approval of title by the attorney-general, of an easement described in the agreement as "the sole and exclusive right, privilege and easement of occupying and using at all times hereafter as a fishing ground and for no other purpose, for the use and benefit of the public." These easements generally extend for a distance of 66 feet from either bank, and include, at intervals of about one-half mile, additional entrance rights-of-way from the nearest highway.

In order to simplify negotiations by more definitely informing the vendors of the exact rights sought by the state, the following explanatory matter was included on the printed agreement form:

The occupation and use of said parcel above-described as a fishing ground for the use and benefit of the public is understood to include the following rights, privileges and easements:

- 1. To persons legally entitled to do so, to catch and take fish from said stream by legal means and for this purpose to travel said stream and to utilize the lands above described to the extent to which the same are hereby granted and may be necessary for the full enjoyment of this right, privilege and easement.
- 2. To improve the said stream by the installation and maintenance of current deflectors and retarders and any other means deemed necessary by said "Purchaser" for the purpose of fostering and improving fishing therein.
 - 3. To protect from erosion the land above

described by mechanical means or by the planting of trees, plants or shrubs where and to the extent deemed necessary by said "Purchaser" and by the same means to provide a shade for the protection of the fish in said stream.

4. To post such signs and posters along said land as are deemed necessary and suitable by said "Purchaser." The rights, privileges and easements to be granted are to be used by the said "Purchaser" for the benefit of the public subject to and in accordance with the provisions of the Conservation Law of the State of New York as now enacted or hereafter amended or enacted and the rules and regulations of the Conservation Department of the State of New York as now in force or hereafter adopted.

In case the course of the stream of water located on the strip of land above described shall be changed by natural or artificial means, the right, privilege and easement hereby granted shall follow the course of stream as changed.

No right or title of either party hereto, other than as hereby agreed to be conveyed, is to be affected by the execution or acceptance of the proposed deed.

The said "Owner" is to reserve to himself, his heirs and assigns, the right to the use of said land including the right of fishery in said stream insofar as such right is not inconsistent with the use of the same as a public fishing ground and with the rights, privileges and easements hereby granted and is further to reserve the right at all times to use, assign or convey said water in the stream and said lands hereby granted for domestic, agricultural and water storage purposes, the generation of power and for the purpose of watering cattle and stock as fully, freely and without limitations as if this grant and any deed confirming the same had not been made, provided, however, that the rights to be conveyed hereunder shall extend similarly to any reservoir or flooded area created by any development made in accordance with this paragraph.

It is further mutually understood and agreed that this agreement is to apply to and bind the heirs, devisees, grantees, executors, administrators and assigns of the "Owner."

It should be emphasized that the easements which have been acquired are for fishing alone and do not provide for camping, hunting, or any other public use. This provision has been found to be important in many cases where private property has been abused by hunters or by campers. Strangely enough, we have found no case where the landowner objected to fishermen, but many instances when they objected to a camping or hunting party. Without question the inclusion of hunting or camping privileges would have prevented many acquisitions and would have delayed progress very materially.

Entrance rights-of-way have been located in accordance with the wishes of the land-owners, usually along common boundary lines. Easements or outright purchases of small areas for parking spaces also have been secured at points where entrance rights-of-way meet the highways, but no attempt has been made to build or maintain automobile roads from the public highways to the streams, largely to forestall the possibility of fishermen driving cars across crop land.

Logs for construction work and any other

(Continued on next page)

materials where available shall be obtained from any State governmental subdivision where these materials are made available.

A form or contract for purchase of easements can be made up by the Justice Department and this form shall be uniform for all waters and streams so that there shall be no difference in agreements or regulations in different sections of the state, and these forms shall be similar to the forms used in New York State.

After the stream surveys are completed the Board of Fish Commissioners will review each project and approval shall be voted before any project shall be started or recommended to any other cooperating agency.

The Board shall, upon adopting the program as outlined, approve the expenditure of necessary funds to do all the work as outlined in this report, and the Board shall recommend that this work be delegated to someone responsible and competent to supervise and direct this work. This person shall be responsible to the Board and shall be allowed to procure such assistance and help as are necessary to promptly complete the preliminary work necessary to guide the way to producing the results desired.

It is suggested that Conservation Commissions in New York, New Jersey, Michigan, Ohio, and other States where much of this same work has been done satisfactorily in the past ten years be contacted and visited if necessary so that the experiences of these States can be used as a foundation on which

to build our program.

Submitted January 20, 1944 JOHN L. NEIGER, Chairman JOSEPH M. CRITCHFIELD EDGAR W. NICHOLSON

North Penn Fish and Game Reorganized

Close to 150 sportsmen from towns in the North Penn boroughs in upper Bucks and Montgomery counties partook of a turkey dinner on Tuesday night at the annual reorganization meeting of the North Penn Fish, Game and Forestry Association.

Roland T. Moyer, Sellersville, had charge of the affair, which featured an illustrated talk on "See America First," by Rev. A. Ellsworth Grove, pastor of the Ridge churches in Almont and Ridge Valley. Rev. Grove showed technicolor movies of big game in the wilds of America filmed in a recent tour he took through the West and Mexico.

Rev. Grove said that a traveler need not go far afield to see some of the wonders of the world, several of which are in the western United States. He showed views of the largest trees in the world, in California, the greatest waterfalls, the geysers. craters and the national parks, as well as the bullfights of Mexico.

Committees for 1944 were appointed by President Moyer as follows: Fish committee. David D. Cressman, Walter McElroy, Lee Stoneback, Otto Frederick, Game, Ralph Shelly, George Weiss, R. E. Baum, Abram Mitman, Albert Berner. Forestry, Herbert Moyer, David D. Cressman, Harry Stinley, Wayne Buffenmyer, Herbert Heinrichs.

Directors named are: Charles Greiser, Hatfield; Jerry Thomas, Tylersport; H. H. Godshall, Telford; Frank Richards, Argus; Clayton Huff, South Sellersville; John Urbanchuck, Rising Sun.—Perkasie News Herald.

TO ALL ASSOCIATIONS

(Continued from page 13)

number of days not exceeding five days after the same has been stocked.

RESOLUTION No. 7: That the regulations on fish-bait and bait-fish be changed permitting the licensed dealer to carry adequate supply to meet the demand for fish-bait and bait-fish.

DISPOSITION: Under the present rules and regulations adopted by the Board governing bait-fish a person may have in his possession not more than thirty-five (35) bait-fish or thirty-five (35) fish-bait, or fifty (50) of the combined species. Insofar as a dealer is concerned, if he purchases bait from a commercial grower he could have all he desired in his possession inasmuch as the law provides that he must issue a receipt with every sale. However, they could not be taken from public waters.

RESOLUTION No. 23: That the salaries of the field forces of both the Fish and Game Commissions be increased fifteen percent (15%) or to the maximum, which ever comes first.

DISPOSITION: All employees of the Fish Commission were given an increase during the month of October, 1942, and at the meeting of the Board which was held in January, 1944, a resolution was passed approving an increase for all employees. The necessary papers are now being prepared and will be forwarded to the Budget Bureau at an early date, together with the Board's recommendation.

RESOLUTION No. 35: That the Fish Code be amended to permit the issuance of free fishing licenses to any member of the armed forces stationed within the Commonwealth and to any Pennsylvania resident member of the armed forces stationed beyond the State boundaries but in the state on leave.

DISPOSITION: Act No. 145 was approved by the Governor on May 21, 1943, providing that for the duration of the present war any resident of Pennsylvania serving with the Armed Forces, who has the necessary qualifications under the provisions of the Act, shall be issued a fishing license free of charge upon application to any County Treasurer within the Commonwealth.

The Board greatly appreciates the helpful suggestions which are made each year at the Annual Meetings, and if at any time there are any questions in your own district we hope you will get in touch with us.

Very truly yours, C. A. French, Commissioner of Fisheries...

Monroe Sportsmen Want Ice Fishing

A movement to legalize the "snatch-hooking" of suckers through the ice was started at a meeting of the Monroe County Federation of Sportsmen's Clubs at the court house in Stroudsburg.

-Hazleton Standard Sentinel.

BUY BONDS

ROD AND GUN CHATTER

By THE OLDTIMER

1943 Trout Season a Complete Washout

Well, the 1943 trout season is all wrapped up and put away in the mothballs. All in all, it was pretty much of a complete washout. The early weeks of the season were marked by bitterly cold weather and high and muddy streams. Then the excessive heat of June made the trout lazy.

When the weather and water did become favorable, along came the gas embargo to push the poor fisherman back into the horse-and-buggy days—only there was no horse or buggy

In the days before the coming of the automobile it was nothing to drive 10 or 12 miles for a day's fishing. Then you could always be sure of getting your fish, for the fish were there in great abundance. But with the pleasure driving ban in effect there is nothing left but to borrow your son's bicycle or use shank's mare. Burdened with high fishing boots, creel, net, and rod, your sportsman finds it takes a lot of the joy out of fishing if he has to hoof it or pedal a bike. Lots of anglers just put their tackle away.

The Paradise Folds

Then Fisherman's Paradise, which ordinarily receives a lot of attention from Centre County trout enthusiasts, folded up because of the driving ban just after getting nicely started. Everything considered it was the poorest trout season in our memory. The weather, the water, and the war all had it in for the luckless angler.

Some good catches were made by those who happened to be on the stream at the right time, but there were long waits between such times. As far as we have been able to learn no record-breaking fish were taken.

May Best Month

It has been our experience over many years of trout fishing that May is the golden month for the fly addict. We can truly say that we have taken as many fish on flies in May as we have in all the other months together. And when the May fishing is spoiled as it was this past year by cold weather and big water, the good fishing is over for us.

In this corner we have always thought that after the hatch of May flies, which usually takes place in this section during the last week in May or the first week of June, trout grow fat and logy and it is hard to get them to rise to a fly. In April the water is usually too high and muddy for good fly fishing.

As far as we are concerned the trout season might just as well close by the middle of June. By that time the water in our streams ordinarily has gotten so warm that the trout are not so active.

Wait'll Next Year

There ought to be good fishing next year, for lots of trout must have been left in the streams for seed. The Fish Commission has insisted all along that there was an unusually large stocking of trout last winter and spring. The fish were not caught out; therefore they must still be in the streams. At least we like to think so. Trout enthusiasts are born optimists who are always looking forward to a better season next year.

-State College Centre Times

CLOVER CREEK

(Continued from page 17)

of flies. We have tried on several occasions to transplant this fly with little success.

On the lower five miles of the stream the tillable lands are left behind and while the upper part is rather easy to fish, it is on this lower section that the angler finds things to his liking.

The section through the former holdings of the Pittsburg Lime and Stone Company compares well with any water it has been my pleasure to see. A little concentration on this water during shad fly time can cost a few flies plus leaders in trout too large to handle. I manage to leave a few each season.

The dry fly fisherman does well to let the duns and grays predominate his selection of flies. A female Beaverkill will probably be useful. The light Hendrickson has been top fly for me.

If you pay Clover Creek a visit you will find it pretty well populated the first few weeks of the season, but from the middle of May on you will have plenty of room to stretch and enjoy yourself.

Fish & Game Asso. Holds Annual Meeting; Elect Officers

New Hope—The annual meeting of the Fish, Game & Forestry Protective Association was held Wednesday night last week in Town Hall. William Lewis was reelected president, and the other officers are as follows: Carlen Kooker, 1st V. P.; Wilbur Cooke, 2nd V. P.; Donald Delacey, secretary; Russell J. Landis, treasurer; Lee Jones, acting treasurer; Executive Committee: Clyde M. Davis, John G. Fetterolf and C. A. Magill.

Fetterolf, Thomas Magill and G. H. Ely were named delegates to the Bucks County Federation. Alternates are Frank Carver, Wilbur Cooke and Tom Naylor. Committee Chairmen are: Game- Sam Horn; Fish-Harry Austin; Forestry- Russell Black, and Thomas Dillaway assistant.

State Fish Warden Harry Z. Cole was the guest speaker. He appealed for cooperation in keeping public streams clear of debris and pollutions. Recently hundreds of fish were killed in the canal when poisonous refuse went into the stream above here. The canal had been restocked last summer and fall. It's not only a question of sport, but much needed food is involved during the war.

Lee Jones led an interesting discussion on "The Value of Pheasant Raising." Lester Seidel, Junior Leader, and Ralph Horton, Boy Scoutmaster, made an appeal for a constructive wildlife program to interest boys.

The increase of foxes and other predatory animals were discussed, and a committee was named to promote fox hunts, both for the sport and to protect poultry farms in the community. Harper Atkinson, Wilbur Cooke and Thomas Naylor were appointed.

The following new members were elected: Robert Yates, John Hilliard Jacob Isler, Rulon Johnson, Joseph Tierman, L. K. Teel, Charles Lvezy Jr., and Ralph Horton, all New Hope; Harry Blair and George R. Kline, of Lambertville; Rev. Charles F. Ehle, Buckingham; Horace Lutz and Wm. Robinson, Doylestown; Harold DeCoursey, Wycombe; Joseph Shuke, Fountainville.

-New Hope News

CAMPFIRE CORNER

By JACK WELCH

Finny Food From the Farm

Two hundred to 400 pound of fresh fish a year, besides the fun of catching them, from a one-acre pond on your own property! It's no idle dream, providing you have a suitable site and are willing to devote some extra time and labor to the project.

The farm fish pond idea is comparatively new, but has proved so worthwhile that Ohio has set a goal of 400 ponds in the state by July, this year. The federal bureau of fisheries says "the feasibility of pondfish culture has been demonstrated fully, and ample quantities of fish for home use are today being propagated in established ponds on farms, proving the value of such an undertaking for that purpose alone."

This implies the attendant benefits of providing a watering place for stock, homes for muskrats and frogs, bee culture areas, waterfowl rendezvous, upland game pockets, and irrigation, one or more of which may be incorporated in the pond program. But back to the main issue:

Back to Issue

If there's no suitable site on the farm or other tract the farmer or sportsmen have in mind for establishing a pond the project may as well be dropped right there, because the expense of building an artificial site would be all out of proportion to the returns.

Chief requirements are a supply of water and a bottom soil that will hold it, a place to build a dam and water-impervious earth with which to construct it. A fertile soil is desirable and there should be erosion control on the watershed to insure against flash floods and silting. A drain structure is necessary, but you can't expect Mother Nature to provide everything. A spring, or a number of them, a small stream, or rainfall runoff from the drainage area must supply the water.

Swamp lands, old watercourses and natural catch basins are good sites, since they possess the required fertility, hold water well and contain seeds and spores to insure the rapid development of vegetation and minute animals.

While in well cultivated fields runoff is rapid and the drainage system may be small, there is likely to be more danger of flooding. Grass and woodlands constitute permanent cover which retains more water, and a larger drainage area is needed, but the flood dan-

ger is minimized. The average yearly precipitation must be taken into consideration.

Consult Farm Agent

Having made a preliminary survey of your prospective site, it's time to consult your county farm agent. He may know little more about fish pond projects than you do, but he'll know where to obtain expert advice and aid. In Ohio the conservation department not only inspects the site to pass on its suitability and furnishes a master plan of operation, but gives assistance in locating and staking out earthen fill and spillway, loans dirt-removing equipment, and supplies wildlife food trees, shrubs and aquatic plants. Probably several other states are working along the same line.

Fish most commonly reared in fish ponds are the large and small mouth bass, crappie, bluegill and catfish, all of which are good eating and four of which, at least, will furnish plenty of sport as well as food. Fish for stocking usually can be obtained from your state conservation department.

Once well under way the fish pond is almost self-supporting, so far as food for its inhabitants is concerned. Bass will feed on young bluegills, but some of the latter will escape to grow to frying pan size. However, it has been found that the golden shiner and the blackhead minnow give best results for forage purposes; they not only satisfy the bass appetite, but thereby prevent cannibalism. Bass will round out their diet with tadpoles, frogs, crustaceans and insects.

If your fish are supplied with plenty of food and pond conditions are agreeable, they will be practically immune from disease.

For detailed information on the construction and operation of fish ponds write your state conservation department, and obtain free leaflets No. 17, "Construction of Farm Ponds," and No. 27, "Farm Fish Ponds and Their Management," from the Fish and Wildlife Service, Merchandise Mart, Chicago, Ill.

—New Kensington Dispatch —Greensburg Tribune

A colored country preacher, who was strong on visiting the female members of his flock, was traveling along the road to the house of one of his flock when he met the small son of the lady member.

"Where's your maw?"

"She's home."

"Where's your paw?"

"He's home."

"Tell 'em 'howdy' fuh me."

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A RECORD IN THE FISHING LOG

(Continued from page 10)

over the spot. For five seconds it bobbed there, then under it went in a heavy dimple. When the rod tip was lifted it felt mighty solid

For several seconds nothing happened; it was like hooking a log. The memory of similar experiences of hooking Atlantic Salmon briefly passed in review. All of a sudden pandemonium broke loose. A vicious run made the reel scream and a fine rainbow splashed out of the water. Quickly it turned and came back, leaving a big belly of line in its wake. After this was taken up, there was another spectacular jump. From then on it was the usual give and take subsurface play. The trout was finally netted.

For many years it has been my cherished desire to take one over 20 inches on a dry fly from our hard fished open water. This one like all the rest did not make the goal, but it was very close to it.

The hatch of drakes lasted at least an hour and one half and very interesting dry fly fishing held up right with it. You can bet your life that we will be watching for the appearance of the scion of this hatch and the subsequent rise of trout as the seasons roll along, and there will be some Parson's Duns in boxes held in anticipation of a repeat performance.

For the remainder of the day the trout fed freely on the midges. It appeared that there was no limit to their capacities. Now and then one mistook a quill, hackel and hook for the real thing.

Lew, Bob, Lloyd, Al, Mack, Bart, Toots and Von, along with a few other old faithfuls, cashed in on the great fishing.

When at last the day died some of us left with cherished memories; memories that will call us back to the spring year after year. That day will always be "well remembered and never lost."

TYING THE WHIP-FINISH

(Continued from page 15)

revolved clock-wise for 180 degrees, or onehalf turn. This action results in the situation shown by figure 8, second position, with the basal half of the S resting against the shank. The handle is now revolved clockwise for 3 or 4 turns more, but in doing this care must be taken not to exert too much pull on the thread with the left hand because the tang and spring hook are very highly polished and as slippery as the steps leading down to Sheol. So, if the thread slips from the hook or the tang jiggles off the shank your labor will be lost and a new start becomes inevitable. If successfully made, the revolutions will result in the situation shown in figure 9, when the tie is completed by releasing the loop from the hook. withdrawing the tang and pulling the knot tight with the left hand.

A study of the operations, shown in figures 1 to 10 inclusive, will show that these are comparable with those attained by the whipfinisher as just described.

A third method of making the whip-finish, is one that I personally prefer, and is illustrated in figure 10. I published a previous illustration and description of this in the

Pennsylvania Angler, issue of July, 1939, but it is here redescribed and illustrated.

In this method, a small darning needle, set in a handle, is laid diagonally along the hook shank, and 3 or 4 turns of the tying silk are then made around both the needle and the hook. The forefinger of the left hand is then pressed against the coil on its far side, and the free end of the tying thread is passed through the eye of the needle (Fig. 10). The needle is then withdrawn, thus pulling the thread with it through the coil which, when pulled tight, completes the operation.

It is essential in this method that a needle having a large eye be used as otherwise the thread may prove so reluctant as to require exercising in railroad Latin. This is by no means a dead language but is a powerful tongue rich in expletives apparently required for the successful operation of railroads.

As a mere kid telegrapher and signal-man, something over a half century ago, I acquired a full vocabulary which is prone to become vocal under stress of sufficient provocation today. In those early days my telegraph station was a solitary tower located on a singularly lonely stretch of steep grade with only the clicking of the instruments and the whine of mosquitoes for company the whole night through.

Working a 12 hour night trick, 7 days a week with no relief, little time was available for recreation. However, even then was I afflicted with the *mania piscatorius* and betimes, a spasm of fishing hunger overcame all considerations and thus robbed us of day time slumber.

Consequently after a hard days fishing, old Morpheus would come gumshoeing along in the wee small hours before dawn and demand imperatively his tribute. But since sleeping on duty was verboten, I would lean back miserably in my chair, grasping a five pound iron coupling pin in my pendant right hand until, dozing off, my grasp would loosen and the pin would fall clattering to the floor. Awakened temporarily, I would bend down and pick it up and repeat this torture until presently nature would hold sway and I would snore through it all. Then might appear the glittering orb of a long freight, bowling down the grade until, sighting my red bullseye, the engineer would grasp the whistle cord and scream for brakes. Recollect please, that this was before the advent of air brakes on freight cars and the brakes had to be set by hand. Then the unfortunate middle brakeman would go galloping along the swaying car tops, brakestick in hand, winding them up as he went. Presently the clamor of the squalling brakes and the grinding of wheels would penetrate my somnolent ears and, awakening with a start, I would pull the semaphore signal down to clear. Soon the strident voice of the brakeman would be heard orating in classic railroad Latin, his words becoming gradually and horridly audible to a shout as he arrived and then fading rapidly in the distance. Anyhow, such minor distractions could not erase the memories of the day's fishing, and this, after all, was the really important consideration.

Yes, railroad Latin is an eloquent tongue that has no counterpart today although perhaps canal boatman's Sanscrit formerly surpassed it, but that has been a dead language these 40 years or more.

LETTERS TO THE EDITOR

(Continued from page 1)

Gentlemen:

I have been notified that my subscription to the Pennsylvania Angler expires with the next issue and in as much as I do not wish to miss a single issue, please renew my subscription for one year.

The Angler, due to its strong Pennsylvania flavor, should reach every fisherman of our State, and I feel sure that it will be accepted by all if they only have the opportunity of getting their hands on one issue.

I firmly believe that many more fishermen of this State would gladly subscribe to the Angler if it be brought to their attention.

As food for thought I respectfully offer the suggestion that a few additional lines be added to the 1944 Fishing License Application—something like "I desire to subscribe to the Pennsylvania Angler—12 Issues, fifty cents."

It is not too much to say that sometime in the future the ANGLER will be included with the Fishing License, the combination selling, for let us say, \$2.00 or thereabouts.

In any event, continued success to the Angler, the Fish Commissioners and employees who make fishing a down right pleasure in the Keystone State.

Respectfully yours,

A. E. Fraser, Wilkinsburg, Pa.

Gentlemen:

May I say I was glad to read Dan Brenan's piece. Hope you have more such technical material on the fire.

Yours truly,

H. M. Hernon, Detroit, Michigan.

A FLING AT FLY CASTING

(Continued from page 16)

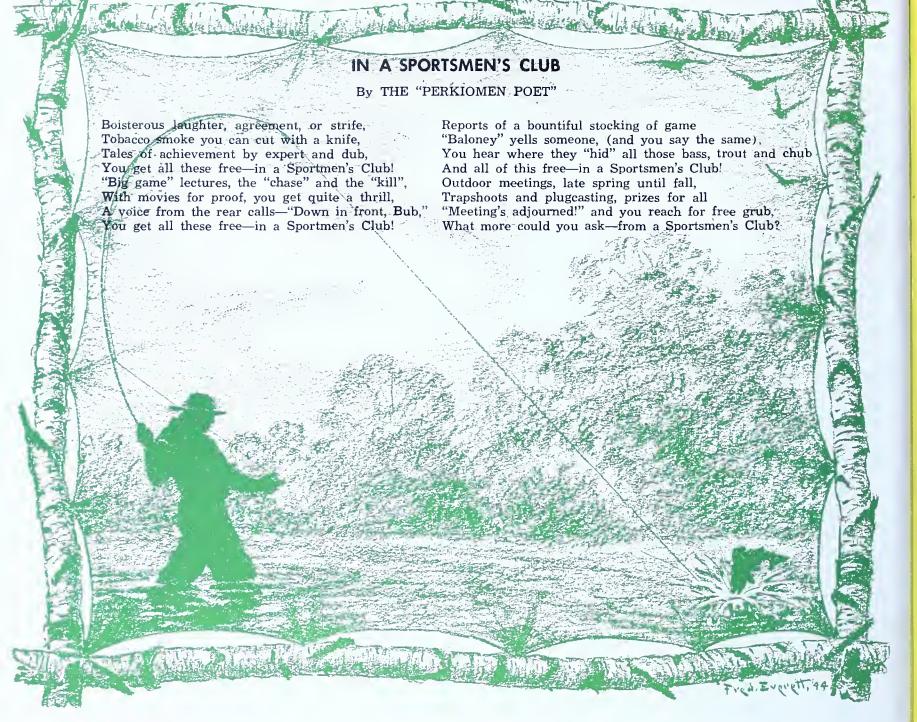
ucts." Don't buy this or that just because a friend says "it's the best." Go to your nearest tackle dealer and ask him for the name of the best fisherman he knows. Find a veteran somewhere, and when you have found him, tell him your problem and ask him if he won't help you to get outfitted properly. If he refuses, he's no fisherman or sportsman, so forget him and start all over. But nearly all of them will be glad to assist you in your purchases, and after that is taken care of, perhaps he might be induced to take you along to his pet stream to give it a tryout—who knows?

You'll find this flycasting game an interesting one. Your writer has slaved at it for approximately 15 years and it becomes more intriguing as time goes on. Then too, after flycasting comes fly fishing, which is an art that I hope someday to know a little about, provided the Almighty is kind and allows me an additional twenty years of fishing after I've mastered flycasting. The best of luck and don't let up! It is fun all the way.

Once there was a girl who was staying at a hotel and she phoned the desk clerk that there was a rat in her room.

"Make him come down and register," replied the clerk.





OUT FISHIN'

By Edgar A. Guest

A feller isn't thinkin' mean,
Out fishin';
His thoughts are mostly good an' clean,
Out fishin'.
He doesn't knock his fellow men,
Or harbor any grudges then;
A feller's at his finest when
Out fishin'.

The rich are comrades to the poor,
Out fishin';
All brothers of a common lure,
Out fishin'.
The urchin with the pin an' string
Can chum with millionair an' king;
Vain pride is a forgotten thing,
Out fishin'.

A feller gits a chance to dream,
Out fishin';
He learns the beauties of a stream,
Out fishin';
An' he can wash his soul in air
That isn't foul with selfish care,
An' relish plain and simple fare,
Out fishin'.

A feller has no time fer hate,
Out fishin';
He isn't eager to be great,
Out fishin'.
He isn't thinkin' thoughts of pelf,
Or goods stacked upon a shelf,
But he is always just himself,
Out fishin'.

A feller's glad to be a friend,
Out fishin'.

A helpin' hand he'll always lend,
Out fishin.'

The brotherhood of rod an' line
An' sky and stream is always fine;
Men come real close to God's design,
Out fishin'.

A feller isn't plotting schemes,
Out fishin';
He's only busy with his dreams,
Out fishin'.
His livery is a coat of tan,
His creed—to do the best he can;
A feller's always mostly man,
Out fishin'.

From Mr. Guest's book "The Path to Home", Copyright, 1919. Used by permission of The Reilly & Lee Co., Chicago.





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IMPORTANT—The Editor should be notified immediately of change in subscriber's address.

Please give old and new addresses.



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FOREST STREAMS PROVIDE WATER FOR MANY PEOPLE

More than a quarter-million people and a number of industries depend upon the State forests for their water supplies, James A. Kell, Secretary of Forests and Waters, stated.

A survey by W. E. Montgomery, deputy secretary, reveals that towns and cities in Pennsylvania which have well forested watersheds suffer comparatively little from water shortage during drought periods.

Five municipalities, Chambersburg, Shippensburg, South Renovo, Waynesboro, and Mont Alto, have their impounding basins for water supplies, and fifteen other municipalities have more than 50% of their watersheds in State forests. Within the six forested counties of Bedford, Fulton, Franklin, Cameron, Monroe, and Pike there are 335 miles of pure mountain streams against 15 that are polluted. Not one of the 74 streams which originate within the forested areas of these counties are contaminated.

At the present time 16% of the forest area of the Susquehanna River watershed, 15% of the Juniata watershed and 25% of the West Branch of the Susquehanna River watershed are within the State forests.

Where there is a good forest cover rainfall is conserved, erosion lessened and a more even and regulated flow of streams secured. Where the forest is protected nature holds back the water in the soil and slowly feeds it to springs and streams, delivering water to reservoirs evenly instead of in torrents, and clear instead of muddy. Forest fires destroy this beneficial effect of forests as a deep layer of forest litter is the most important measure for water conservation in the mountains.

-Capitol News.

New Jersey Fish and Game Commission Request Fishermen To Help Improve Trout Waters

TRENTON, N. J.—To improve fishing in their favorite trout streams anglers are asked by the State Fish and Game Commission to join in a movement to create more and better fishin' holes along the miles of excellent public streams in New Jersey which will soon be scenes of great activity when the 1944 season opens on April 15.

Plans are underway to again restock the streams with thousands of large size trout from the world-famous Hackettstown Fish Hatchery before the season opens, the commission announced. By proper damming and snagging of trout streams the fishing areas will be greatly increased, more fish accommodated in every mile of stream and more sport and food provided for licensed anglers.

Harry E. Cudney, Chief Warden, who is in charge of distributing the trout to the various sections of the State, reports that approximately 3,500 dams have been constructed

in North Jersey trout streams by game wardens during the past several years in order to improve trout fishing generally. Many interested fishermen have also helped in building small dams of rocks and logs to improve the streams.

With spring weather already prevailing and many licensed fishermen planning to inspect favorite trout fishing areas, the State Fish and Game Commission urges that they take time out on such tours to build a dam at a likely spot in preparation for good fishing in the future.

Sportsmen's organizations are also asked to join in the movement to improve trout fishing conditions in New Jersey by organizing groups to build larger dams. All such operations should be undertaken with the consent and approval of the land owners, the commission said.

Dear Charlie:

I received the February issue of the ANGLER today and I must say that I believe it to be the best copy to date, and full of surprises too. I just now (and it is 3 A.M.) finished changing my Bass Bug Article and illustration because of Ed Leonard's Midget Bucktail Article in this issue. I had an illustration of a small combination fur, deer hair and feather pattern that was so much like Leonard's that I was wondering how our two patterns happened to be cross paths at the same time. I dug into my tackle box for a copy of my nymph which I am enclosing. This fly was tied more than a year ago, and although it is not exactly like Leonard's there is so much resemblance that I decided to change my illustration, and omit it from the article.

A second coincidence was Fred Everett's peach of a story on his fly evolution. As you well know I have been an advocate of just that type of a fly for some time, and the thing that immediately came to my mind was a fly of that type you showed me one day up at the Paradise. The Tup's. Remember? Another fly of that same type is the little sulphur dun. I had tied some of them up for Alex and that same season we had quite a bit of fun with them in Shad fly season (first week in June). Tell Fred for me that there is not a single winged fly in my fly assortment except spent and two fan wing Royals.

My friends thought me just plain nuts when I built a glass case with a mirror to set in the bottom so I could get a trout's eye view of the flies I was making. The glass case was made so that I can remove the mirror and look at the flies through the water towards the sky. Now I feel that I'm not the only Nut in this game.

Another surprise was your Jap Beetle Article which I read word for word and with special interest because John Fox, formerly of Lykens and now living in New Jersey, dropped in at my place last season and showed me quite a selection of Coffee beetle

(Continued on page 16)

HIDING PLACES AND FEEDING STATIONS

Instincts of Self-Preservation and Hunger Lead Trout to Choose Some Parts of Stream for Shelter and Others for Forage

By DICK FORTNEY

T WO most important things in the life of any trout are:

1. A place to hide.

2. A place to eat.

Self-preservation dominates the instincts of the trout with the same intensity that ambition and love occupy the human intellect and if a trout is to live through the span of years from its fingerling stage to maturity and old age, it must be able to avoid the host of natural enmies by which it is beset, and it must have nourishment.

Instinctive urge for safety explains why trout-and all other fish, for that matterseldom are found in areas of a stream which lack some sort of cover such as rocky bottoms, sunken logs and other debris, undercut shore line, and deep pools.

Never-ending hunger of a trout impels it to make its abode in those sections of streams where muddy bottoms, weed growths, and other factors produce an abundance of insects and aquatic life.

It is essential for an angler to know at least the fundamental facts about hiding places and feeding stations of trout else he can be nothing better than a hit-or-miss fisherman who catches trout only when he happens to stumble upon feeding fish as he makes his way up or down a stream.

A list of trout hiding places is comparatively short, for natural conditions apply a strict limit to the variety of cover which the fish is able to use for its own protection.

But a list of feeding stations is so long that at first glance it appears that trout seek and find their forage in almost any type of water. That is true. The point for the angler to realize is that trout often feed in sections of

Quiet water down stream from rocks is a trout stream "lunch counter."

streams which the casual angler immediately labels as not worth his time and effort.

"What's the difference where trout hide?" someone may ask.

The answer is, simply, that trout which are in hiding can often be induced to begin feeding if the angler knows where to find them and understands the proper approach. I'd like to illustrate this point with an incident which, although it concerns bass rather than trout, certainly can be applied to any kind of fish.

A friend and I were idling one hot summer afternoon in the shade of a friendly tree beside a pool in a bass stream. The sun was blinding in its brilliance; the water warm and extremely low. There was no sign of life—not even a minnow nosing about—in the pool. My friend had been staring for some time at a large, flat rock in the very center of the pool.

"I'll bet there are bass hiding under that rock," he said.

He attached a fly and spinner to his leader, cast the lure so that it came to rest atop the flat rock, then carefully retrieved line until the spinner dropped down the side of the rock to the creek bed. Then with a sharp lift of the rod he picked the spinner off the bottom and began retrieving it with short, hard jerks. A beauty of a bass came out from the dark shadows beneath the stone, hit the spinner with a rod-shaking smash, and was securely hooked.

We repeated that performance three or four times-until the action of the hooked fish and the disturbance our lures made in the water frightened the fish that may have remained under the rock.

Luring a trout from its hiding place with a dry fly is a much tougher job than that, but it can be done.

So knowledge of trout hiding places is valuable. There are half a dozen of these refuges, including:

- 1. Deep pockets in streams in the vicinity of logs, boulders, or other submerged obstructions
- 2. The recesses of cut-back creek shores or the rocky ledges which so often lie close to the shore in trout streams, and even the thick tufts of grass and other vegetation which may hang out over the water from the
- 3. Rocks in a creek pool—and not necessarily large rocks, either. Many a big brown trout imitates an ostrich by sliding under a rock and feeling perfectly secure although its broad tail is right out in the open. Incidentally, rocky formations in pools which are near the mouths of small tributary streams (sources of colder, fresher water) are especially favored by trout.

4. Deep eddies in the stream. Here the water depth itself is the safety factor, enabling the trout to avoid being seen by its relentless enemies—man and many forms of bird, animal, and reptile life, and even from bigger, cannibalistic fish.

5. Deep holes in small streams. Even the tiniest brook has somewhere along its course deep pockets into which the trout can scurry for protection when it is alarmed.

There are other hiding places, but these five generally cover the field and are of the types to be found in all kinds of streams.

The question of trout feeding stations is vastly more complicated and lengthy, and more important, too, so far as the average Pennsylvania angler is concerned.

In the first place, the connection between hiding places and feeding stations should be emphasized. Particularly is it true that large fish do not move any farther from their hiding places than they absolutely must in order to satisfy their appetites.

So the angler can be sure that when trout begin feeding they will explore, first of all, the water in the immediate vicinity of the spot-a rock, a sunken log, or a snag-where they have been finding shelter. If there is sufficient food, you can be sure the trout will remain there unless or until they are fright-

Eddies in fast water—that is, little patches of water at the sides of a swift riffle or where a riffle flattens out to form the head of a pool—also are favorite feeding stations, There are a number of reasons for this fact, but the most important is that the swift water acts as a delivery system, carrying bugs, minnows, worms, and other forage into the quiet water, where they sink slowly in the still eddy and are easily picked up by the waiting fish.

Under-water currents are usually found in



Trout can both hide and feed at overhanging shore lines.



Rocky bottoms provide shelter.

eddies, and these help to place forage within reach of the fish. At the same time, eddies usually form in the vicinity of rocks and other underwater obstructions, so the fish has the dual advantage of a hiding place as well as of a feeding station.

It's perfectly obvious that a trout will choose as its feeding station a place where there is an abundance of forage. In any stream one such place would be along a shore line, where insects fall off vegetation into the water and where sudden rain squalls may wash worms out of the soft soil into the stream.

Minnows can be expected to be found in the vicinity of submerged boulders in a stream that break the flow of the current or around which the small bait-fish can hide. So trout feed there too.

A fishing friend of mine has a particular fancy for little pockets of quiet water on the downstream sides of rocks that are only partly submerged in the middle of trout stream riffles. Floating a fly on such a pocket, with moving current on both sides, is a nice trick, but he has mastered it and as a result has caught many handsome trout in such spots.

A shallow riffle is another fine feeding station for trout and a productive fishing spot for the observant angler.

The next time you visit your favorite trout stream, wade into a shallow riffle and give it a close inspection. One thing you are certain to find—numerous pockets, some of them quite large, in which a trout can lie out of the flow of the current and where it also can grasp passing tidbits which it likes to eat.

And, still on the subject of shallow water, never forget that really big trout have a habit of feeding in extremely shallow water. This is because minnows frequent the more shallow parts of a stream and because the shallower the water the easier it is for a trout to reach insects and other food which falls on the surface of the stream.

The line of drift—so named by John Alden Knight, the famed angler and author—is a never-failing tip-off to trout feeding stations. The line of drift is the direction taken by a stream current or currents—for example, the currents set up by a formation of rocks or other obstructions in a stream, or the cur-

rents developing at the head of a pool, where the riffles flatten out. Floating bubbles and foam mark the course of such a current. In the water itself, the stream carries forage in the identical direction in which the bubbles float.

The shade of a bridge spanning a stream always is a spot worth the angler's attention. Trout instinctly gather, both to rest and to feed, in the dark spots along a stream.

The tail of a pool—shallow, always swift water just before the riffles develop—is always worth careful attention. It is a difficult place to fish, probably even more difficult to approach without frightening fish that may be active in it. But some mighty fine trout (and bass too) are caught in such spots.

Other feeding stations could be added to this list—every stream has its own particular types—but the list already is long enough to support the contention that trout do feed according to certain well-fixed instincts and conditions, and knowledge of what these are will turn a mediocre fisherman into a successful angler.

There are a couple of final observations worth setting down.



A dark shaded spot under a bridge is a favorite hide-out for fish.

One concerns the brown trout, the most common member of the species found in the streams of Pennsylvania. It is this—and never forget it!—that brown trout feed any place in a stream they please.

Sometimes they are in the riffles and the heavy fast water; again in the very slowest parts of the pools. They forage in the deep holes of the largest pools; and also in the shallow water along the shore lines where their backs may show above the surface.

And, finally, there is no denying the fact that the tougher the spot for an angler to fish, the surer the chance that fish will be found there. For the same tangled brush or fallen logs that make it almost impossible to get bait or fly into the water also protect the fish and provide it food.

Completing an impressive ceremony, the lovely daughter of the founder smashed a bottle of champagne over her stern as she slid gracefully down the way.

-Seattle (Wash.) Tribune.

FIELD AND STREAM

By R. E. ANGST

A few years ago a local Middleport angler became an ardent streamer fisherman. He fished such big water streams as the Lackawaxen, the Lehigh, the Tobyhanna, etc., and as one does, he soon found out that this streamer fishing costs money when one fishes them hard. Being also an amateur fly-tyer of no mean ability he decided to do something about the cost of streamer fishing. What he wanted was a streamer that could be made from cheap, easily obtained material, not fancy in construction, easily cast, and one that would take fish consistently. Quite a large order, as any fly rod manipulator will tell you. That he solved the problem we'll let it to anyone who has ever fished with him, and there are a host of anglers who have. Therefore, today, we want to introduce the unacquainted to the "Mickey" streamer. The doubters can stop reading at this point, or they can check our statements with "Bucko" Sadusky of Middleport, Charley Jacobs of Orwigsburg or the fish wardens of Wayne, Pike or Lycoming counties.

Mickey's special, as we call it who used it from its inception, is frankly, a copy of some well known streamers on the market but is not a copy of any one streamer. It is made on a long shank hook with the body black. That can be black chenille, black silk, or what have you. The body is then ribbed with gold or silver, most of us prefer gold but carry both. For the hackle dyed buck-tail is used and the color is light yellow. That's all there is to it. There is no more. No spinner blade, no fancy eyes, or a darn thing. However, if the angler prefers, and many do, the thing can be weighted to suit one's fancy. It then casts harder but it gets down deeper. And boy, it brings them up if they are there and like a minnow.

One story about Mike and his streamer will suffice. A dozen similar ones could be told. A number of anglers were fishing the Lehigh below Stoddartsville one day last season. Fishing was dull and only one angler had taken fish when the local boys arrived. This successful angler lives on the stream. He is there day in and day out almost every day of the season. This day he was using black helgramites and since no one else had black helgramites the story was a one man show until Mike came along. In less than two hours of fishing, and covering not over 200 yards, Mike took ten rainbows almost matched in size. They ran between eleven inches and thirteen inches. The bug thrower had five during this time and could hardly believe his eyes, when he saw Mike's fish. They became acquainted right there and have been friends ever since.

John Shapella, formerly of Middleport, measured a trout on our tape two years ago. It is now mounted and hanging in Roman's bar at Middleport. It measured twenty-one inches six hours after being killed and it's a brownie from the Lackawaxen taken on "Mickey's" special. 'Nuff sed.

—Pottsville Journal

ARESARK

By SPARSE GRAY HACKLE

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AM just a Milquetoast. Subway guards manhandle me, reception clerks make me wait, and unmannerly fishermen parade right through the pool I am using, all without a word of protest from me. Perhaps my mildness excites their instinct to dominate, for I notice that I get more than my share of overbearing treatment. Even women pick on me—I vividly recall one, who pursued me down two flights of stairs with a hatpin, and another, who grazed my shrinking form with a hurled salt cellar.

Of course, like all mild men, I have had my moments. But those were few, and long ago. I hoped for sons who would become as tough and aggressive as I longed to be, but my sons turned out to be daughters, who dwelt together in amity instead of the constant battle and turmoil that I had pictured for my boys.

Save one, they didn't even want to fish, which was a blow to an angler of as much devotion as I. So it can be understood that I used much time in teaching that one the way of the rod, and in preaching to her of the delights to come when she should be able to cast the fly. At the age of twelve, my dear Mick could cast as clean a backline and as tight a roll on the lawn as you would want to see. Having thus qualified, she was obviously entitled to try her luck for real fish and I made it an occasion by taking her for a couple of days to the famous Anglers' Inn on the Brodhead.

Mick is "the littlest one" but her narrow beam is no indication of the engine it contains. Blood and suffering dismay her, but no living thing can make her retreat. Scintillating and active, she still has a wistful, childish side which continually reminds me how sensitive and defenseless she is.

I was thinking of that as she struggled up the brook ahead of me in her new boots. I watched her place the brown bivisible neatly and retrieve slack as she watched it intently. It disappeared with a little splash, the tip went up in the midst of a loud gasp, and she was fast to a fish. He wallowed, and I saw it was a chub.

"Lead him in and I'll let him go; it's just a chub," I said, unthinkly. I should have remembered that to children a fish is a fish, and neither size nor species is as important as the concrete fact that a living creature has been made a captive.
"Oh, Daddy!" she said protestingly, "can't

I keep him?"

I went to work on the hook, which was well imbedded, and her next words came from the soft side of my little Mick.

"Don't hurt him, Daddy. See how he wiggles! You're hurting him!" she said, and tears came to her great brown eyes.

Then, in the next moment, she was trying to catch the released fish in her bare hands as he regained his lost dignity beside a stone, and when a rise appeared in the water ahead, she was all for going after the feeding fish. How can an adult keep up with the kaleidoscopic emotional changes of a child?

He was no chub; the speed of his chopping

rise to the first cast attested that he was a small trout. I retrieved the brown bivisible from an overhanging branch. His failure to come again to repeated casts was a grave disappointment but this was forgotten when a really decent fish started feeding in the tail of the pool above.

As Mick floundered enthusiastically up toward a casting position, I watched her with sadness in my heart. The little mite-so brave, so sensitive; so energetic and yet so little fit to cope with harshness. Soon, I thought, she will be a woman, and some thick-necked young thug will take her away from me. Will he always be kind to her? Will he always be gentle when she is far away, where I cannot protect her? Will he bring tears to her dear eyes and sadness to her sweet face? With astonishment, I realized that I hated this unknown young man.

Micky had finally achieved the improbable fact of getting within reach of the feeding fish without putting him down. She was lengthening line neatly and with aching concentration on the recurring rises of her intended prey, when we were both startled by a voice from the bank.

"Huh! Girl fishing!" it exclaimed, with accents of astonishment and condemnation. Its owner was a red-headed boy, cut pole in hand, who had evidently just come to the pool to fish.

"Get away! I'll catch him!" he continued masterfully, unfurling line and seeking a point from which he could fling it without getting his feet wet.

"No, you get away! I was here first!" said Micky, in her soft voice. "Go away! You'll scare him!"

Evidently the boy had not noticed me in the background, for he paid no attention to

"Gwan, beat it!" he replied carelessly, and threw in his worm with a wild swing. It fell far short. Meanwhile, Micky had picked up her line and was working out a cast. The fly fell fair over the fish and floated nicely, but no rise came. The boy threw his worm again, with no better luck, and apparently decided that the fish was beyond his reach.

"You can't get 'im!" he taunted, as Micky picked up her line and dried her fly. But just then the trout rose again and apparently the boy decided that stronger measures must be taken. Picking up a stone the size of a baseball, he splashed it into the pool, directly where the rise had occurred. At the dismay on the little girl's face he laughed raucously.

What occurred then can only be expressed in a word that has come down to us from the olden times. In the days when swordsmanship was in its beginnings and the sword but a hewing tool, the protection of armor was so necessary to a fighting man that it was insanity to dispense with it. But among the Norsemen there were stark fighters so prone to demoniac fits of rage that, when the seizure was on them, they would throw off their armor and plunge headlong among the foemen, with no body covering but a sark, or

shirt. They fought "baresark" and were known as baresarkers, or berserkers.

It was a baresark rage that seized Micky. Down into the brook went my cherished rod. Battle flags flew in her cheeks and bale fires burned in her eyes. A squalling warcry issued from her distorted mouth and in that instant she was in full stride, heedless of clumsy boots and slippery rocks. Running low to the ground like a charging lioness, she pounced on the astonished boy with flying fists, and for an instant they scuffled in a blur of whirling arms and legs. Then there was a soft plop and the redheaded boy drew back, his face a mask of pain and alarm from which gushed a crimson stream.

For all his red hair and bravado, he was only a child, not much larger than Micky. She had gained the psychological "jump" on him and the impact of her fiery personality, not less than the painshot, numbing impact of her stiff punch to the nose, had taken the starch out of him. For him, at least, the fight was definitely over and the flow of tears from his eyes almost equalled the flow of blood from his nose. For Micky, too, the fight was over. Elbows out and eyes flashing, she stalked toward me and then fell into my arms in a paroxysm of sobbing, turning in an instant from a warrior to a sensitive little girl.

The wounded boy fell back when I approached, and sullenly avoided my attempts to administer first aid. Snuffling and still bleeding, he made his way along the bank toward the head of the pool, with the evident intention of crossing the footlog and leaving the scene. Our fishing was obviously ended for the day, so I turned to Mick and dragged off her heavy boots.

I looked up just in time to see the redheaded boy wave his arms wildly and fall from the footlog into the head of the pool with a sensational splash. His head popped out again, but water ran into his open mouth. He gulped and gurgled, and I finally comprehended that he was in over his depth and was drowning before my eyes.

In the instant it took me to collect my wits and start to his aid, Micky flashed under my nose and her lean little body splatted face downward on the water. Her thin arms splashed in furious rhythm and a little fountain played between her heels. I was witnessing a very workmanlike six-beat crawl, as swum by a Girl Scout who had but recently won the white cap of a life guard at camp.

It would be more dramatic if I could relate a thrilling rescue, but to be truthful I must say that the redheaded boy had floundered to a foothold before Micky had reached him. Hiccoughing and belching, he stumbled ashore, the blood from his nose spreading vividly over his wet chin. Without pausing, he climbed onto the bank and disappeared through the bushes. Standing waist-deep, Micky watched him go, then turned to me, giggled and swam back with the effortless ease and finish of a mermaid.

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FORKED-TAIL CATS

By W. R. WALTON

T HE river-inhabiting or fluviatile catfishes of the genus *Ictalurus* are not only among the most abundant and valuable of the freshwater food fishes of the Eastern United States, but they afford, I believe, more consistent sport to a greater number of persons than most of the other game fishes.

The following matter pertains exclusively to the channel or spotted catfish Ictalurus punctatus Rafin and the blue catfish I. furcatus Les. Most of the information included is taken from notes made during 30 years acquaintance with these species, largely within the Potomac Basin. These fishes are not native to that area but were introduced there many years ago, from the Ohio River Basin. In the Potomac proper, the two species are perhaps equally abundant but in the smaller tributaries, the channel catfish strongly predominates.

There is a tendency among writers to exclude these hard-fighting cats from the category of game fishes, but to those of us who take them on the fly rod, often on artificials intended for smallmouth bass, this seems an injustice. Not only do these cats, during the heated season, readily take the fly but they then put up a fight which, if not so spectacular, is even more powerful and determined than that of old bronzeback himself. Occasionally they leap when hooked but the usual reaction is to bore bottomward and to dash wildly in any direction that seems to offer refuge. The first powerful rush of a four pound forked-tail cat will smash a light fly rod effectively when not wielded with utmost caution and skill. When struck in deep, swift water such a fish often exhibits considerably more endurance than does a black bass of equal weight. In such circumstances, when fishing alone from a canoe, I have found it extremely difficult to bring the fish to net even after a struggle lasting many minutes. Its big, muscular tail is endowed with such enduring vigor as to test the skill of any fly fisherman who encounters these fish.

I have heard bass fishermen, on numerous occasions, curse these cats as enemies and competitors of the smallmouth bass and doubtless there is some competition between them. However, the food habits of these catfishes are so catholic, or undiscriminating, as to render it doubtful whether such competition really is serious. Furthermore, it is well known that the bass retaliate by gobbling the little catfish wholesale on all occasions.

The forked-tail cats feed actively practically throughout the year. During the freshets of late winter and early spring, they follow the rising river into overflowed areas and at such times have contained many beetle grubs and other land insects as well as countless crayfish claws.

Of the two species, the true channel catfish, *I. punctatus*, is the more agile and slender, and its younger specimens up to 12 inches frequently are quite highly colored. It is a silvery gray to olive along the sides, the back is dark slate color and the belly almost white. When freshly caught, the skin of the region immediately back of the pectoral spines is brilliantly iridescent with a coppery lustre. The sides are mottled with irregularly placed black spots but which tend to disappear in specimens of four pounds or over. The head is small, pointed, and the eye comparatively large and mobile. Although this species is said to attain the weight of 15 to 20 pounds, specimens over five pounds are comparatively rare in the Potomac and lower Susquehanna.

In its younger state, the pectoral spines of this fish are formidable weapons for not only are they needle sharp, but their posterior sides are edged with backwardly directed sharp teeth that can slash one's hands like a razor blade. In older specimens these spines become blunted and less dangerous.

Cat fishermen doubtless were amused at recent widely published statements in the daily press to the effect that recently it had been discovered that catfish are capable of producing a sound. They all know that when first taken from the water, the channel catfish often produces a rather loud noise, in fact one of its common names is "fiddler" and reflects this fact. This sound is accompanied by the alternate movement of the pectoral fins and, I think, is produced by rubbing or stridulating their bases together, possibly resonated by the swim bladder. These spines can, at will, be rigidly set by the fish so that they cannot be forcibly moved without fracturing them.

The blue catfish *I. furcatus*, grows to a much larger size than the channel cat, in fact this is the species celebrated by Mark Twain in his "Life on the Mississippi" as reaching a weight of 250 pounds, and Barton W. Evermann has cited specimens of that size. However, the largest one taken from the Potomac of which I have reliable information weighed 37 pounds. In color this fish is uniform slaty blue to almost black along the back, shading to silvery white on the belly. It habitually frequents larger streams and deeper water than does the channel catfish which loves the riffles in company with the small mouth bass. The best

means of separating them is by the anal fin which in the blue catfish numbers 30 to 35 rays.

Although so common and abundant, little seems to be known regarding the reproduction of the blue catfish. Judging by the condition of the roe of specimens taken in the Potomac, the breeding season possibly begins in May extending into July. Very small specimens, under 6 inches have been taken frequently from holes 25 feet deep, during cold weather.

The channel cat is better known and is said to construct a nest and when the young appear they are defended by the male. Studies made in Georgia apparently revealed that this fish may spawn when but one year old and breed twice during the season.

In February and March, while the pupae of the winter stoneflies of the genus Taeniopteryx are swimming in myriads to the surface, these fish often were gorged with these insects. During spring freshets, regardless of the muddy water and flooded banks, fishing for forked-tails usually is excellent, and fine catches of catfish usually are made at such times. However, on a falling river, the fish may cease biting for days at a time possibly because they have fed to repletion during the rise.

Forked-tail cats feed on almost everything organic that floats or swims in the water. When seeds of hardwood trees are floating in the streams in spring and early summer, the stomachs of these fishes often are filled with them. Later, as the water warms, their intestines frequently contain quantities of a dark slimy moss that grows attached to the rocks in the stream bed. One specimen of I. punctatus, taken in the summer of 1943, had its intestines gorged with the shells of a small bivalve measuring uniformly 10 mm in its longest diameter. Although I had examined hundreds of catfish previously, this was the first instance of this kind observed. This mollusk probably represents a species of Sphaerium of the "finger-nail" clams.

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Photo by Warden John Ogden. Catfish and other common fishes like the holes, eddies and stream mouths.

AN EXPERIMENT WITH ARTIFICIALS

Proof That The Most Successful Fisherman Is The One Who Experiments

By AL STINE

"BURR-R-R" went the alarm clock promptly at three a.m. on the morning of the season's opening day. With chattering teeth, I partly fell, partly stumbled into a suit of long underwear, because nature demanded this protection in the chilly temperatures of the Pocono mountain region of Pennsylvania where we were going to try our luck the first day on the West Branch of Waullenpaupack creek.

Going downstairs I went through the usual breakfast ritual. How slow the coffee seemed to percolate! Usually the oatmeal was done in a jiffy, but it seemed to drag endlessly this morning. I guess I was slowly working myself into opening day jitters.

I said to myself: "Listen you old buck. This has been going on for twenty years now. Grow up and be a man. Be nonchalant. Be bored. Pretend you are going shopping with the wife. Don't let ----

Just then a soft tat-tat sounded on the kitchen window, and with a broad grin on his face Jack was giving me the comeon sign. From long experience, sometimes not always pleasant, I tried to be quiet so that the good spouse could not greet me on my return, weary, tired, and hungry with, "What's the idea? Just because you belong to the nocturnal order of raccoons, don't forget that there are still some sane human beings who believe that the early morning hours just before dawn should be devoted to slumber and quiet!"

Going to the door I admitted my fishing pardner.

"Are you certain that you have all your paraphernalia?" I inquired. "If you recall the first trip last year, Jack, you left your lunch at home, which had caused me to be somewhat weak at the end of the day, because of your inroads upon mine.'

"The paraphernalia has been checked and doubly checked," replied Jack. "And what's more if you don't hurry, all the trout will be caught. There will not be any fun experimenting then."

There seemed to be added emphasis in Jack's tones when he said "Experimenting" but at the time I was so occupied with collecting my duffel that the full intent of his statement was not made to dawn upon me with its implications until later in the day. The gods of the stream had, unknown to me, banded together the previous night to launch a surprise attack on me the following day.

"Listen, Jack," I hastily retorted, "can't you see that I'm trying to do my best. I left the can of worms in the garage last night. I'll get them, and be out at the car in a jiffy."

When I mentioned worms, a grin as long as your arm spread across Jack's features.

"Al," he said, "you remind me of a doctor with his satchel of pills. The Doc would be lost without his pellets and I believe you would be in a worse state without your wrigglers.

"That's what you think!" I snorted. "Why you know as well as I do that you are the only voting citizen in our precinct who doesn't aim to dunk a worm on opening day. Just because you were lucky the first day last year with your dry flies doesn't prove anything."

Another thing that added to my rising blood pressure was Jack's calm and unruffled manner. Jack was a fellow who certainly followed his own scheme of things concerning fishing matters. Suppose, for example that the trout grape-vine had passed the information around that Fontinalis was feasting on grasshoppers to the exclusion of all other offerings. What would the majority of us do? Proceed to collect grasshoppers, and hide to the banks of our favorite stream. Not so with pardner Jack. If I stood beside him, casting to some foaming eddy, whose overhanging grassy banks spelled doom to some grasshopper unfortunate enough to leap before looking, and hooked some hungry trout with my baited grasshopper, even though it might be one that would be ashamed to think that a foot would measure it, he would still continue to cast his artificials.

Without so much as a slight rise in his tones he replied, "Calm, pardner, calm. I'll admit I used dry flies the first day. You know that I do not use worms or minnows, so after experimenting with wets, streamers, and spinners with only two small trout to show for my efforts, I decided to give the drys a try, with what results you only too well remember. Get out of low gear, old timer, and try free wheeling for a change!"

The tackle by this time had been stowed in the trunk beside Jack's. It did not seem to fit as freely as other times and when I remarked to Jack about his hoarding tin cans, all I got in reply was a muffled retort to the effect that it was high time that we get started. Before the day was over I was to find out just what the hoarding was.

From the time we left home until the first scrub pines of Monroe County made their appearance seemed only the time I needed to consume two pipefuls of tobacco. Six o'clock found us finally parked at our favorite bridge, and assemblying our gear by the dawn's gray light. During the preceding weeks the amount of rainfall had been much heavier than the previous year, and remnants of a two foot snowfall were still pouring their contributions into the feeder brooks and main stream, causing the stream to be fairly high and slightly roily.

"Say, Jack. What was the name of that number 14 dry fly that you said might work this morning? I believe it was battleship gray, or sunset orange in hue. Of course, if after two or three hours of useless casting, you decide to change to worming, why just let me know. After all, we are buddies, and I have an extra worming rig I can let you use as an emergency outfit."

"Al, did you ever try changing your conversational tactics?" Jack asked. "I have finally come to the realization that when it comes to trouting, the word 'artificial' has no place in your fishing ideas." Knowing this, all I can do is look with pity upon your trouting procedures, and hope before the happy hunting grounds claim another member that you will admit that there is only one offering to present to the thoroughbred of the stream, namely artificials. You know that if I mention the word "sauerkraut' in your presence your countenance takes on such a sickly look that I could almost swear that you were just entering a twelve hour spell of seasickness. Well, how do you think the poor trout feel when they have to gobble those worms of yours? I guess they close their eyes when they swallow them, and think that the only thing left for them to do in order to keep body and soul together, is to gulp them down."

It had always been our custom when fishing together to take opposite paths. Jack would always go up stream while I would wander down. This time I reversed the order and started upstream. The chief reason for this was because I was going to try a new worming technique. Instead of my usual ten pound test leader and cheap level line, I had outmaneuvered the wife with such financial strategy that unknown to her I had purchased several new leaders tapering to IX, and a double tapered line to match the rather stiff action of my rod.

I had explained to Jack when I first showed the line to him that it was purchased not to cast tremendous shoots over water being fished, but to aid in a more natural presentation of the bait to the trout. During my winter reading I had read with careful attention an article entitled "Worming for Trout." To do this properly, requires fine terminal tackle, hence the tapered leader and line.

Instead of aimless and slipshod casting I had resolved this season to study the stream and fish more carefully. After rounding a bend I approached cautiously one of my favorite pools. Here the creek curved rather oddly. About ten yards above the pool, the creek ran over a shallow, pebbly bottom, deeping gradually into heavy riffs, followed by the slower glide of the deeper, boulderstrewn pool. It was a challenge to any angler's skill because at the end of the curve a deep, narrow channel spewed forth the contents of the pool into white, cascading rapids. The trick was to thoroughly cover the bottom with the worm before it was sucked into the outrushing water at the tail

Absorbed with these thoughts it seemed the corner of my eye caught the gleam of a swiftly curving body in the brownish water. I say brownish because these swift flowing mountain streams of Pennsylvania's Poconos have a dark brownish bottom that makes the water, although it is crystal clear, seem as though it had been dyed by some brown solution. The gleam seemed to come from the lower end just above where the water narrowed into the outlet. Walking quietly along I noticed a huge submerged shelf of

rock that jutted into the pool. It did not need a Sherlock Holmes deduction on my part to realize that this would be just the spot for some old wise grandad to make his habitat from where he could forage the pool at his leisure.

I carefully selected a nice pink worm that had from all appearances been very conscientious about his scouring job in the sphagnum moss at home, because he seemed to have reached the right tint and toughness. I now proceeded to save him from the fate of the usual trout fisherman's worms. Instead of hooking him in a tight ball, or impaling him up on the hook shank, I hooked him once through the middle. This left him free to produce a lifelike effect as he drifted along the bottom. Due to the highness of the water I was forced to use two small split shot which were not fastened directly to the leader but where the 1X tippet was joined to the leader, a short strand of about three inches protruded. To this strand I had pinched two shot.

Now came the chief reason for the tapered line and leader. It reduced the visibility of line to leader, and being smaller in diameter allowed a freer movement to the bait. Swinging the bait gently toward the head of the pool, I allowed it to roll freely along the bottom with a slack line. Slowly it tumbled past the lair of the hoped for whopper. Imagine my spirits! Down through a beautiful pool, disturbed for the first time this season, and not even being grabbed by a chub.

On about the eighth or ninth cast I saw the line stop midway past the submerged

ledge. Then began the telltale back and forth movement of a brownie when he takes a worm. What a temptation to set the hook; but it is far better to wait, or otherwise you will be greeted with an empty hook instead of a trout. After sufficient time had elapsed I gathered in the slack line, set the hook, and bang! The battle was on. Now, I thought, here goes the leader. Quick as a flash it struck me then. Why lose a good fish? Go him one better. Since he's an oldtimer he's wise enough to try and saw the leader in two along the ledge. So I promptly lowered the rod tip and took in line to where it joined the leader so that the rod rubbed against the ledge instead of the leader. After five minutes of bulldogging, the net was finally slipped under a beautiful seventeen and one half inch brownie.

How quickly one can become an optimist. Already I was mentally picturing myself gloating inwardly, as I proudly displayed the trout for Jack's inspection. I felt sure that several more of proportionate size would be reposing with this one before I joined my pardner for our customary snack. But after several futile hours when not even a nibble was forthcoming, I decided that the fish should be put on a priority list too.

When I got back to the car Pardner had the coffee pot bubbling. Boy, did it feel good just to stretch out and relax because every new season found the spirit as willing but not the flesh.

"Come on, Al," Jack said at last. "Let's see them! You're pretending poor luck if I know anything."

Opening my basket I presented to his gaze

the one and only victim. "I'm sorry but this is the total score for the morning. By the way, how about viewing your results?"

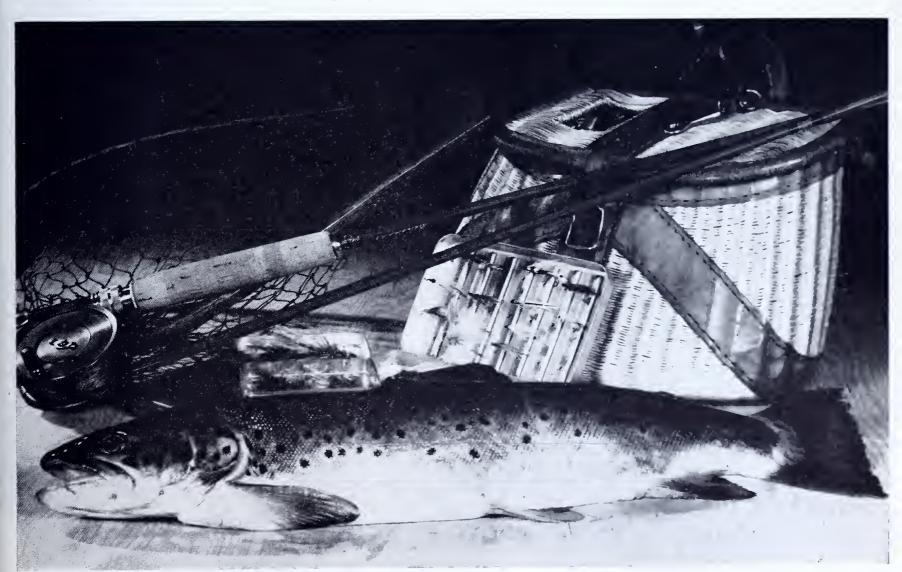
A genial smile slowly creased his face as he drawled in that unconcerned manner of his. "Well-done, pardner. I presume he fell to one of your worms? I'm sorry but I cannot duplicate your catch. I cannot even show a brace of 10 inchers. Wet flies or streamers just didn't seem to produce. I remember on opening day last year that I could have had the limit in the first hour. However, Al, I'm not licked yet. I still have the afternoon's fishing, and I think the thermometer is slowly climbing which may mean that they will make up for lost time on those flies they so unconcernedly passed up this morning. It certainly would be the ending of a perfect day if I could tangle with one the size of yours on a fly.'

If an individual is fortunate, about once a year they will be visited by a suddenly revealing thought. Why not lay aside the usual worming procedure, and accompany Jack for the afternoon? He had always been preaching to me to get out of the rut, and give artificials a try. Surely, I thought, there must be something to his technique, or else why the patience in the face of such an unlucky morning?

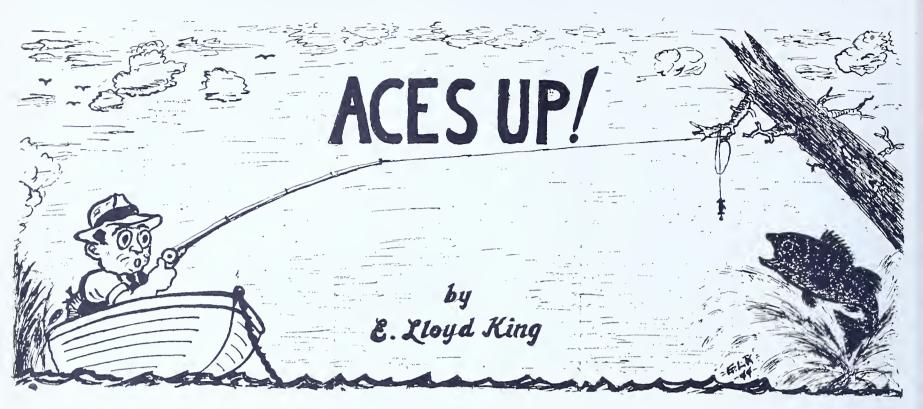
"Jack," I said so suddenly that he looked up with a start from where he was leaning over, absorbed in bending a new fly to his leader, "how about my joining you for the afternoon session? Of course if you . . . ?"

"Listen Al, nothing would suit me better than to have your company for the remainder

(Continued on page 18)



A 231/2 inch brown trout caught on a small plug in the writer's first experience in plugging for trout



S OME people go so far as to say New Cumberland, Penna., is the bass fishing Capitol of the Commonwealth. Man for man, fish for fish, New Cumberland masculinity and giant smallmouth are legendary. Situated just across and down the river from Harrisburg, smack up against one of the hottest stretches of the sweeping Susquehanna, everybody angles and a male "just ain't a man" until he's taken a four pound smallmouth . . . to be socially acceptable a guy has to top five pounds. And five pound smallmouth in Pennsylvania just don't loiter behind every ledge . . . many fishermen splash about an entire lifetime without even touching water that's kissed the hallowed scales of a V-striper.

Now all this build-up leads to a certain point! Far and away the old fashioned pumpkin seed reigns supreme with the discriminating long range sharpshooters infesting the downriver ledges. There must be a reason. There is! Foremost and as already mentioned, the four and five pound smallmouth, but secondly still another worthy tho lesser interesting trophy . . . seven and eight pound wall-eyes in number generous enough to rate more than occasional!

Now perhaps a full year ago or at least thereabouts, the writer promised and began a series of articles on an ultra-selective little group of midget bass plugs . . . of which and equipped therewith, no Keystone smallmouth basser would ever really need any other. As a sort of up to the minute reminder the articles were intended to relay: the origin, the development, the case history of the lures discussed, and in no sense to indicate these represented the only successful plugs obtainable. The writer did insist, however, that plug for plug and for Keystone fishing, the lures to be named were the equal, and in many instances (personally far and above) the superior to the best in the run of the lot contemporaries. And for a very definite reason—to wit: smallness, lightness, in short, "fish scare" impact insurance!

Three of the plugs have already been discussed; Fred Arbogast's Jitterbug, Shakespeare's Baby Popper and Dwight Cook's (South Bend) Midg-Oreno. And thus we

come to a fourth great, the ace in the hole of New Cumberland anglerdom . . . a second Shakespeare entry, the famous No. 6601 Midget Spinner or in my crowd just plain "pumpkin seed," . . . the only criticism, small in stature, a leaning to the heavy side. More of the latter later, perhaps! Let's get on with the origin, development, case history.

No doubt the origin of the first clumsy pumpkin seed type plug is forever lost in musty antiquity, back somewhere in the long bygone days when anglers learned tasty game fish might be excited or angered into striking at movement and glitter. Old Gramp used the bug and called it an underwater minnow; perhaps quite as reasonably his grandpa before him employed a somewhat crude model and christened it something similar. Sufficient to say, antiquity and fore and aft spinner lures, walk hand in hand. And nowadays, we moderns are coming to admit maybe the horse and buggy day oldsters had something on the ball after all; New Deal, etc al. notwithstanding.

Anyway, back to Grandpop; well, at least Old Dad! After all, we are talking about the birth of the Midget Spinner! As compared with present day models, the average plug of 30 to 35 years ago boasted comparatively large dimensions, ranging in length from 3 to 5 inches, weight proportional, with only an occasional bait measuring a mere $2\frac{1}{2}$ to $2\frac{3}{4}$ inches.

But along the angling trail, fishermen were experimenting, requesting, impoverishing. Although making out better than passably well, keen witted devotees sensed the need of further refinement before the artificial man should ultimately outstrip the best of the live bait dunkers. Along about the time William Howard Taft assumed the Presidency; practically synonmous with that witching age when the really daring gals brazenly began lifting skirt hems to discreetly display hitherto unknown feminine ankles-and the equally shameful, to slyly indulge in a few steps of the bunny hug or the turkey trot, behind closely drawn shades of course. Well sometime there abouts probing sportsmen expressed more than a passing interest in smaller size plugs.

Starting with a revolutionary smaller than average body in view, Shakespeare engineers designed a tentative bait. After many, changes in the length and shape of the body, size and location of metals, a lure came into being, and quite encouragingly having the desired action in water. But each change, no matter how minute, required time! Each development had to be followed by extensive tests to determine the real worth of the improvement or otherwise. Anyone who may have finangled such experiments knows full well the varied and sundry pitfalls enroute, the rosy horizons, the disappointment and retracing of weary steps.

And so on down through the years! Even the rank recognizes no one bait is always successful! Sometimes the fish are near the surface, often times in deep holes, and again in the reeds and rushes near the shore. Shakespeare engineers held that finny perspective foremost in mind throughout it all. Likewise the size of the ultimate, the weighting, the balancing, required that the lure might be intelligently used in fast water or in deep pools, angling straight down, across of even up. In this wise, the bait ultimately to be known as the Midget Spinner arrived at its rightful own.

Pertinent, briefly and chronologically the saga runs thus . . . the true prototype of the modern answered to old Dad as the Underwater-Minnow. With body length of 13/4 inches, the armament consisted of two treble side hooks, one treble tail job, a head and tail spinner. At the same time a somewhat similar bait was also offered, boasting head spinner only and a feather treble tail barb.

Then in 1924, the bait body lengthened to 17/8 inches; further the two treble side hooks dropped from the picture, being replaced by a belly treble. The refinement immediately provided a better balanced lure. 1934 saw the present name of Midget Spinner adopted as being more descriptive of the bait. Just one or two more observations on material; the plug bodies are regularly made from choice aromatic red cedar, which all in all is pretty generally conceded most satisfactory for underwater service. The hardware comprises a happy medium of "safe" lightness

and durability when subjected to hard knocks. And that's just about all there is to it excepting possibly a little dipsydoodling Southern Pennsylvania style.

And now my only criticism. Personally the Midget Spinner lists among my first five plugs. An advantage is it casts powerfully, reel thumbing being easy. Even a novice can bomb a shoreline nicely a full 75 to 100 feet away; the skilled caster just as readily perhaps 100 to 140 feet. It combats strong head winds vigorously. I invariably choose the plug when a long, long underwater retrieve cast seems necessary. All too regularly I lose lures when a backlash occurs close up to the rod tip, six or eight the season my usual score. Positively I would employ the plug oftener were it a bit lighter in weight. Generally rod conscious, I set my sights at 3/8 oz. as tops, and the old killer can not make the weight . . . not even when I try switching hooks, altering or substituting hardware.

I do not know what color or finish means. Sometimes I think it means a lot; another day nothing at all, and frankly I believe even the most veteran pluggers will confess a like state of wonderment. Generally hereabouts the Silver Fritter rates most favored; frankly I elect the Green Perch. As regards experience astream, the note book credits the SF with the more bass, small fish up to fourteen or fifteen inches, the Perch larger specimens. I'll trade three dozen twelve or fourteen inchers any day on one 19 or 20 inch honey! Some other fellow may have a different version. No doubt the Goddess of Luck plays a bigger part than any of us realize insofar as color combination may be concerned. Doubtful, is the supposition that the bass stops to consider color. Doubtful is the supposition that he sees the lure any too well at all. If he definitely recognized slight color variation, likely he might not

But then contriwise, here's an interesting interlude. Also be your own judge as to whether or not such an experience might be considered of any positive conclusive merit or even worthwhile for future reference. My nicest bass two years ago (1942) came on a self-paint job or rather alteration, a freak home concocted combination not offered commercially.

Early in the season whilst Charlie Fox, Don Martin, Alex Sweigart and myself were tarrying over some ham and eggs up Fort Hunter way, Charlie obligingly reminisced that the most effective midget spinner he ever used came in red and yellow, and was no longer obtainable. Happening to possess an odd red and white, a color which I pass up at all times, personally thinking it agreeably useful only the first couple weeks of the season, and likewise feeling a yen to experiment, your correspondent went to work with steel wool and enamel. Lo and behold! within a week or two the red and white bloomed forth into red head, yellow body. Then immediately into the fishing kit and the trials and tribulations astream.

Periodically I employed the plug, mostly unenthusiastically, generally on days when everything else failed. Two, three, four weeks and a couple months the red and yellow remained a fishless virgin. Then a trip to the Blue Juniata, early September, and a full morning and early afternoon without a strike or inkle. Disgusted I jumped into the

car and started the trek homeward . . . at least nightfall wouldn't find me wet, hungry, weary with a thirty mile drive yet ahead. Within three miles of home I turned off along the famous Conodoguinet.

Aimlessly, I waded right out into the ankle deep ledge outcroppings beside the little used, dead end dirt road. Tying on a Perch pumpkin seed, just to indulge a little target practice, I quartered it far down across the ledges to the left hand shoreline. Although this is big bass water: lazy, indifferent, indolent, I did not bother to follow the retrieve, choosing rather to eye several squirrels on the tree tops nearby. As the plug came back over a particularly dark recess I detected a wake and gurgle, felt a slight jolt or slap, and saw big rings widening into the rippling eddy. "Just a little monkey!" surmised I.

Still indifferent I winged a second cast down and across. Again I cocked my eyes at the frisky squirrels, one of which now protested my presence for dear life: scolding, barking, chattering, long tail jerking, white belly throbbing in convulsive tremors. Amused I called up to him: "Pig! You're on those green hickory nuts too soon!" And then again at the dark pocket, not twenty-five ahead, "Splash!" The light jolt, the wide ringlets appeared in the eddy. "Ah! Ha! That crazy little flyer wants to be playful! I'll just sink a barb into him next time! Maybe then he'll remember and grow up to be a big bass some day!"

Now all alert and poised, I made the third toss. The fish did not offer. "Cagy, huh! Well I'll fool him!" So to rest the supposed flyer, I varied the cast, tossing one in the opposite direction, upstream and to the right hand shoreline. And blamed if a twelve incher didn't hit right on the edge of a tiny sandbar. Fooling around perhaps five minutes with the flyer before releasing him, it seemed time to try the other. Again I tossed to the left, watching, poised!

And when the inkle came, I almost fell back into the stream. Consternation, utter amazement, breathless surprise! The same modest splash, the same gurgle, the same widening arc of rings, or at least I like to think so. What my eyes detected, however, was a mighty form, the above surface broadside of a big one. And to this day I can not figure whether the bass intended to strike and then refused at the last split second, or whether it merely slapped at the plug with an angry tail, or if the big baby actually hurdled the lure which incidently came through the water perhaps eight to ten inches beneath the surface.

"Great Balls of Soap! So that's the little one!" as my heart refused to beat, my knees quaked, my ears pounded. I never wanted a fish more in my life, only twenty-five feet away, so near and yet so far. I think Old Man King prayed, maybe! Anyway, he had sense enough to quickly change plugs! Certainly the bass had indicated interest in a pumpkin seed; equally definitely he had thrice refused the perch.

A different color might turn the trick! The first box revealed the red head yellow body, baby. And on it went, fast as benumbed fumbling digits could accomplish the task. And then the crucial moment, the all important cast itself, and with it a quiet calmness, an almost forgotten heritage from the baseball days of long, long ago. The cast dropped perfectly, the retrieve began and then the

dark recess of the ledge pocket loomed ahead: six feet, five feet, three, two, only one. Now or never, and a huge dark shadow shot savagely from the depths, clearing the water in a tumbling splash, head shaking, spray flying, the hitherto virgin pumpkin seed firmly transfixed within gaping jaws. Hopelessly impaled, the big fellow fought gamely and gallantly. To my shame I must admit I kept him. I killed him. Measuring a strong 19½ inches, weighing almost four pounds, too late remorse dictates he deserved a better fate.

Later the same afternoon I took a couple lesser bass on the identical plug, and then failed to get another with it the remainder of the season. After more or less indifferent success, though mostly nice fish, I finally lost the red and yellow plug on a deep Juniata ledge last season, snapping it off on a power cast. However, finally and unto my dying day, I shall remain convinced nothing but the red-yellow job would have taken the big Conodoguinet smallmouth late that afternoon on the early-September day. And that's that, Mister! Take it for what it's worth!

(To be concluded)

Trout Fishing Prospects for Year Are Good

Trout fishermen of Venango County who are still around when the season opens in April and who are able to get transportation, should find plenty of fish awaiting them in the various waters of the area, according to Fish Warden Julius Ahrens.

The warden states that although a fairly large number of fish were taken last year, there were still plenty of trout left in the streams largely due to the fact that the gasoline situation and the thinning ranks of fishermen due to the draft and defense work tended to keep many anglers from their favorite pastime.

About 3,500 brown trout were stocked in this county last fall, and Warden Ahrens is looking forward to another large stocking program within the next five or six weeks. He said that from all information obtainable from the fish commission, it appears that hatcheries have a large supply of fish and it will only be a matter of getting them out.

After a survey of the trout streams, the warden stated that they appear to be in good condition for this season of the year, most of them being free of ice at the present time.

Members of the fishing fraternity are already starting to get into action in other branches of the sport. The warden said that sucker fishermen are beginning to make their appearances at various points along the river.

The question of transportation may again confront the anglers. There is no doubt that the ban on pleasure driving as the 1943 season opened kept many off the streams, but even then a goodly number of anglers for distant points were able to stretch "A" coupons into remarkable mileage figures in order to dangle a worm or minnow or whip a fly. Whether they will be able to repeat the feat again this year if further restrictions are placed on gasoline will be known only when the time for fishing rolls around, but the odds are in favor of the anglers who always seem to find a way to enjoy a day on their pet streams.

-Oil City Derrick.

SPORTSMEN VERSUS DELINQUENCY

By FRANK JURCZAK

THE problem of juvenile delinquency is one that has not been met successfully. It has assumed such great proportions, that our entire social and economic structure is threatened and in some cases disrupted.

In spite of some corrective measures that are taken to prevent this social disease among our youth, delinquency in general, is increasing. To fully understand this problem, many factors must be taken into consideration.

These factors consist of the cause of delinquency, the corrective methods that are in use and methods of preventing delinquency of the youth of our nation.

The chief causes of juvenile delinquency are: parental neglect, poverty, and lack of recreational facilities. Parental neglect is that shameful condition that exists in many of our cities. Children who are neglected, quickly find their own companions and pleasures, some of which are not conducive to their welfare.

The parents who come under this category are the type who are too busy pursuing their own selfish pleasures to give a thought to the welfare of their offspring. They rely on curfew ordinances to keep their children off the streets. These ordinances are of no value if the parents will not enforce them at home.

Delinquency can't rear it's ugly head, where the parents provide wholesome recreation and education. Growing youth needs the guidance and advice of their parents as well as a clean outlet for surplus energies.

Lack of recreational facilities, contributes greatly to the delinquency among the teen age group of today. This is due largely to the selfish and political ambitions on the part of local and state public servants. By this is meant, the various branches of our government who are doing nothing for the juveniles.

True, there are playgrounds and swimming pools, ball grounds and in some instances lakes for boating and fishing. There are not enough of the latter, especially in thickly populated industrial areas.

The method used in trying to correct delinquency among the youth cannot and will not succeed. A delinquent is taken to court and if found guilty of an offense, is sentenced to a reformatory. What he or she didn't know in the ways of law-breaking when they were incarcerated, they quickly learned from other inmates. They emerge not as a chastised person but as a hardened criminal in the making, determined to "beat the rap" the next time. How much better it would be if the money that will be used to prosecute these delinquents in the future, would be converted to projects that would aid in the prevention of this evil. This is the problem that confronts each and every citizen of this nation. Sportsmen and sportsmen's organizations are not excluded. The organized sportsmen have dedicated themselves to conserve, improve and leave to our posterity, a heritage of the outdoors that will assure that posterity of clean hunting and fishing.

Among the obstacles that confront the various organizations and sportsmen who have dedicated themselves to the improvement of our natural resources we find: pollution of streams, predators, forest fires, etc.

Public education is an important factor and it is one which has been neglected by the sportsmen. There exists in the public mind a fallacious thought that boils down to this. Sportsmen's Clubs are selfish organizations interested only in their own ambitions and desires.

The blame for this line of reasoning on the part of the general public, rests with the sportsmen's clubs. It is not too late, to correct the impression, that exists in the public mind. How can this be done?

To give you an example of what one club is doing in the effort to correct the false impression and at the same time bring before the community, the fact that the sportsmen's organization is composed of citizens who are interested in the welfare of the outdoors, and as a group, a responsible organization interested in the welfare of the entire commonwealth.

I am speaking of the Ambridge District Sportsmen's Association, a branch of the Beaver County Sportsmen's League. In order to acquaint the reader with our geographical location, Ambridge is situated on the banks of the once beautiful Ohio River, twenty miles north of the city of Pittsburgh, Pa.

Ours is an industrial town and the population numbers approximately 30,000. Suffice it to say that we lack recreational facilities such as lakes and streams for aquatic sports. Our sportsmen's club is faced with the same problem that confronts practically all clubs at this time. The membership was depleted, due to the entrance into the armed services of many of our members. Shortage of ammunition, seven day work week, gas rationing, etc., have curtailed the activities of the club as a whole.

Activities were at a standstill and something was needed to keep the membership together. This something came in the form of organizing a junior sportsman group.

Junior sportsmen's organizations are not new to many senior clubs that are sponsoring them. They are the sportsmen's answer to juvenile delinquency. By forming these units, the sportsmen can render great service to themselves and the community in which they reside.

They can provide the boys with an organization in which the boys can take an active part and assure a crop of future sportsmen. By doing this for the youth in their community, the public will come to the conclusion that sportsmen are not so bad after all.

Yours truly volunteered to organize the Ambridge District Junior Sportsmen and for the benefit of those who may be interested in organizing a junior branch the following information may be of value.

Through the kind interest of Dr. Joseph Benkert, Principal of the Ambridge High School, the author presented this program to the students. An announcement to the effect that a junior club was being organized, was broadcast at the assembly of the entire student body. A public announcement appeared in the local paper. An initial meeting was held and the officers and directors were appointed to serve the remainder of the year. The Ambridge District Sportsmen's Association contributed \$100.00 to the junior organization. The whole program was explained to the boys and it was stressed that this is not a "tailor made club". All activities are planned and carried out by the boys, a constitution by which the boys will govern their organization was drawn up. Membership cards were printed and entire business of the junior group is in the hands of the boys.

It was explained to the boys that the future of the organization depends on them. A board of Advisors composed of the following keep in contact with juniors. H. E. Woods, president of the Ambridge Sportsmen; H. N. Sikov, president of the Beaver County League; Mr. A. J. Brutout; P. J. Caul, burgess of Ambridge and your author. The duty of the advisors is to advise the boys, on the more perplexing problems.

All types of activities can be undertaken by the junior group. Various committees are appointed by their president, they have their own checking account at the local bank, hold their own meetings, etc.

Hikes, picnics, weiner roasts, swimming, hunting, fishing, camping, skating, community service such as scrap collection and selling war bonds, studies of game, fish, conservation, arms and ammunition are but a few of the activities that can be undertaken.

In two short weeks the membership numbered 150 boys. This is proof, that an organization of this type appeals to the boys. Let the boys build their own organization and the feeling of responsibility and reliance is instilled deeply.

To Mr. Arthur T. Thompson, Editor of the *Daily Citizen*, P. H. Dougherty and Bill Girgosh, sports editors; goes the credit of publicizing this venture.

In addition to sponsoring the junior group, our organization sponsors public meetings, at which we present speakers, movies, serve lunch and award door prizes; admission to these affairs are free and they are held about four times a year.

This is our answer to juvenile delinquency and our method of informing the public of our interest in outdoor and civic problems, which are the problems of each and everyone; we can accomplish much more with the wholehearted cooperation of the people, now and in the future; we must show them that we merit that cooperation. Pure streams, sufficient lakes, an abundance of fish and game, recreational facilities, etc., can be had. It's up to us. Our forefathers were short-sighted in this respect, will we repeat their mistake? Shall we continue to be a great nation, rich in filthy lucre but poor in providing facilities for recreation? IT'S UP TO YOU

PENNSYLVANIA FEDERATION OF SPORTSMEN'S CLUBS ELECT STATE OFFICERS AND ADOPT RESOLUTIONS

THE annual meeting of The Pennsylvania Federation of Sportsmen's Clubs was held in the Forum of the Capitol on Saturday, February 13th. The morning session was devoted to the report of various committees and addresses by conservation leaders of State Government. Resolutions adopted by the eight divisions were acted upon by the State Group in the afternoon. The meeting was concluded with the election of officers for the ensuing year.

Hon. Mark S. James, Director of the Post-War Planning Commission, outlined the State program and explained the purpose and scope of the work effecting the hunter and the fisherman. The extensive program encompasses, among other things: a great system of disposal plants for the treatment of sewage; the construction of dams to create new waters, and an elaborate reforestation program, which will be of particular benefit to: farmers, hunters and fishermen.

Mr. James stated, "I tell you these things, because I want you to know, and to carry the word back to each of your home communities, that your State Government is not sitting idly, hoping for the best in the critical post-war period. We are planning and we are doing things. When the post-war period comes Pennsylvania will be ready."

Seth Gordon, Executive Director of the Game Commission and C. A. French, Commissioner of Fisheries, presented existing conditions in conservation with which the Game and Fish Commissions are faced and briefly outlined future programs.

The following were elected officers of the Federation for the ensuing year:

President, Colin McF. Reed, of Washington First Vice-President, Oscar A. Becker, of Reading

Second Vice-President: Odd McCleary, of Ellwood City

Sec.-Treas., Dr. C. A. Mortimer, of Honesdale.

The State organization adopted the following resolutions pertaining to fishing:

- 1. Reaffirming its former resolution favoring a 50c increase in the fishing license.
- 2. Recommending an increase in the compensation for fish wardens, with a minimum of \$150.00 per month to place them on an equal basis with game protectors.
- 3. Reaffirming its former resolution providing for the appointment of a separate fish warden for each county.
- 4. Empowering the Fish Commission to expend money for enforcing the Pure Streams Law and to stop pollution.
- 5. Urging the Commission to plant more fish food in the lakes and streams of the Commonwealth.
- 6. Recommending that steps be taken at once to recodify the Fish Code for presentation at the next regular session of the Legis-
- 7. Recommending that the Fish Act of 1925, Sec. 72 be amended to read: "Section 50 (c) Pickerel, Perch and Bullheads not more than five tip-ups when fishing only through holes in the ice. The tip-ups must bear the name and be under the immediate control of the person using them.

- 8. Recommending that all dams constructed by the Government and those under war restrictions, including Cannonsburg Dam on Little Chartiers Creek, be opened to the public for fishing as soon as possible without expense for these privileges.
- 9. That the Commission be requested to stock all restricted streams 90% with legal sized fish in future plantings.
- 10. That the Fish Commission and the Department of Forests and Waters be urged to pay more attention to the work of stream improvement.
- 11. That the Fish Commission assume control of all prosecutions for fish killing by pollution under the Fish Laws, and furnish such technical assistance and legal counsel as may be required to assist the prosecuting
- 12. Rejecting a recommended trout season from April 15 to June 30, eliminating the month of July, and from September 1 to 30, and a reduction in the creel limit from 10 to 6 and an increase in the size from 6" to 7".

FIELD AND STREAM

By R. E. ANGST

If one is thinking of doing some early season trout fishing it is time to begin getting some flies ready. With everyone either in the service or working extra hours there isn't much time left to tie flies. In an earlier article we mentioned the Alexandria fly and stated that it was barred from English streams because of its deadliness. This fly has been used locally and fish were taken on it although it didn't prove itself the

deadly killer its reputation had made it out

The fly is made with a silver body, peacock herl and red combination tail. mallard wings and used with ginger hackle generally although it comes with various hackle depending on the whims of the tier. The boys tried it as a wet fly but it may be used as a dry fly in England where they go in more for the dry fly.

An excellent leader sinking preparation is put out by the Fli Products Company of Philadelphia and this firm recommends a tapered leader well greased for wet fly fishing. Well greased, of course, in this case, means with their sinking preparation.

This firm also recommends the wet fly to be cast to the head of the pool, allowing it to sink to the bottom on a well greased floating line. It is then retrieved as in dry fly fishing with an occasional lifting of the rod tip to make the fly jump. This is upstream fishing and exactly the same as nymph fishing.

Flies to use with such a cast include the brown hackle with the peacock herl body, the gray hackle yellow body and the black gnat on size 14 hooks.

Other good recommendations for this type of fishing include the black quill, ginger quill, mallard guill and coachman on size 16 hooks; and the Kagan and breadcrust fly on size 14 hooks

A fly used a great deal by the Easton anglers and found effective in the Poconos in the late evening and on rainy days is called the Zulu fly. This fly is generally tied on a size 14 hook and has a gold and black body, black hackle, long dusky wings and no tail.—Pottsville Journal.



Herman Good of Elizabethtown, ardent plug and fly fisherman, made just on evening for a bass he had located. Everything clicked and he caught his big one.

FISHING IN REVIEW

By AL SINSA

W HEN my father moved from Orange County, New York State to Susquehanna County, Pa., near Montrose, the little meadow creeks and mountain streams were alive with native speckled beauties. The lakes and ponds were full of all kinds of fish.

I was born June 13, 1872, and after I reached the age of five Father took me fishing and hunting with him. Fish were as plentiful as they ever could have been. Lake Montrose, Heart Lake, Tyler Lake, Elk Lake, Upper, Middle and Lower Lakes and many other ponds and lakes were almost running over with fish.

For example, Hell's Half Acre Pond, two miles away was great fishing. It got that name because a gang lived there, the members of which fished on Sundays and raised "Old Ned". Father would hitch up the team in the afternoon and drive there to fish.

After digging some black worms at the spring along the bank of the pond we would go out in the boat and in an hour or two catch 25 or 30 big blue gills, as large as your two hands placed together. When darkness fell the catfish would begin to bite. We would catch a sixteen quart pail full. None kept weighed less than two pounds.

Sometimes Father would fish for pickerel with a piece of fat pork or sunfish belly. Skipping, he called it, and he would catch some big ones.

In May we would go to the creek at the inlet and get a pail full of big suckers. These fish ran out of the pond to spawn.

About a mile from our place, back in the woods, was a beaver dam and meadows. At times we would put out floats, something like a tipup. Pickerel, eels and catfish would get on there and start running. In no time we would have a big mess of fish.

When I was ten, Father moved to Lacey-ville, on the Susquehanna. He and his friend Will Wright were fine finishing carpenters, so we soon had a new boat. We found fish as plentiful in the river as they had been in the ponds.

When one would row half a mile, hundreds of fish could be seen. There were great schools of: perch, sunfish, rockbass, black bass, catfish, fall fish, suckers, mullets and others. As the boat pushed forward they moved away in all directions.

It was legal in those days to fish with: spears, outlines, fish nets, eel racks, as well as, to snatch hook and snare.

When the fishermen went out on the shallows at night with a torch a bran sack of suckers and mullets could be speared. When the river raised a bit it was possible to fill a net with fish of all kinds in the eddies along the shore. We set outlines and if you tended them every hour there would be fish on almost everyone. The same was true if lines were set over night.

Bushels of eels came into the racks on dark fall nights.

In those days no fish from the sea or the Great Lakes came into our market. One could always sell river fish in the towns for 10 cents a pound.

Not many people fished in those days and we only caught what we could eat, give to the neighbors or sell. There was no wanton waste

Included in our fishing group were: Uncle Henry Platt, his two boys, Willis and Charlie, Jonah Billings, Father and I. Jonah got his nickname because he lived by the river and always caught the whales. We took many big bass and "Susquehanna Salmon."

That was in the days before automobiles and very few came in on the trains from the big cities. A few strangers, however, did come in. We acted as guides for them on their hunting and fishing trips.

One group came up from Philadelphia in the Mayor's private car which was switched off at Laceyville. Later I guided parties from: Binghamton, Elmira, Wilkes-Barre, Easton, Allentown, Bethlehem and Scranton.

They paid us a daily wage as well as a hotel bill, carfare and 3 to 5 cents a piece for bait.

Some of the Scranton group included: The Camell Brothers, Charlie Miller, John C. Weickers. Another party from the same town was composed of: H. H. Caston, a court stenographer; J. Frank Seigel, a dancing instructor; Theodore Silkman, a hardware dealer and Dweight Kingsley, a contractor.

We had a big houseboat and a number of row boats. The small boats were loaded on a flat car and taken to Towanda. Wonderful float trips were made and we would stop at night at the hotels in: Meshoppen, Mehoopany or Tunkhannock. The fishing was done with rods and reels and mainly by trolling.

Hotel proprietors, who expected us, would send a rig to the river at night to bring in the party and the fish. A handy man would clean the fish and we would have them for supper and breakfast. The balance would go to the Hotel.

I remember one night we stopped at the Wyalusing House, the proprietor of which was J. Morgan Bream. The next morning the rig took us to the river and we started our fishing below the bridge. They did not bite well that morning but we caught some. When we reached the deep slow water below Sugar Run we trolled with lamprey eels and Susquehanna spinners for "Salmon" with some success.

Coalbaugh, the hotel man at Laceyville was to bring our dinner to Quick's Bend. The big boat with most of our party went straight through to the designated spot below the riffles. Theodore Silkman and I were in a small boat and we turned toward the mountainside of the river where the water was about 8 feet deep.

There was an open place about 10 rods square in the eel grass, and there was located there a great school of bass of all sizes. There were some in there weighing four and five pounds. We anchored at the edge of the opening. In less than an hour the two of us caught 38 nice bass.

The hotel man had arrived with the dinner which included a water melon on ice. They shouted for us to come, so we pulled up anchor and proceeded through the riffles. When they saw our catch they said. "why didn't you stay longer?" Our answer was, "if you didn't want us why did you call?"

This was just a sample of the bass fishing in those days. The largest salmon to my knowledge was taken by Uncle Paul Lacey, and it weighed 23 pounds.

I made enough money guiding to take me through school and college.

I married a Philadelphia girl and then moved to Wyalusing to practice law. My wife liked to fish, so once in a while we would take a day off and go for bass. We would generally come home wth a string that would start at my shoulder and drag on the ground. There was no legal creel limit in those days and six inches was the minimum size, but we did not keep such small fry.

Then something happened. About 1895 the automobile came into use and this invention was followed by improved roads. People swarmed in from the cities by the hundreds, then thousands, instead of by threes and fours.

Soon fishing licenses were required and creel limits were established by law. Parties would come from the cities and camp on the streams and lakes for weeks on end. Some used pocket nets, gill nets and seines and others even dynamited. These things I never did in my life, even in the days of great plenty.

One time when I went to get a license, I asked the Justice, why so many people, who at one time were not interested in fishing, were now taking out a license. He answered me by telling this story:

Two farmers lived in a certain neighborhood. The one had two rather homely daughters and the other had two beautiful daughters. The two homely sisters married the two most desirable men in the vicinity. The two beautiful girls did not marry.

One day the two farmers met and the father of the pretty girls said to his friend, "Neighbor, I wish you would explain something to me. Why is it that your girls married the best men around here and my girls apparently can't get husbands?"

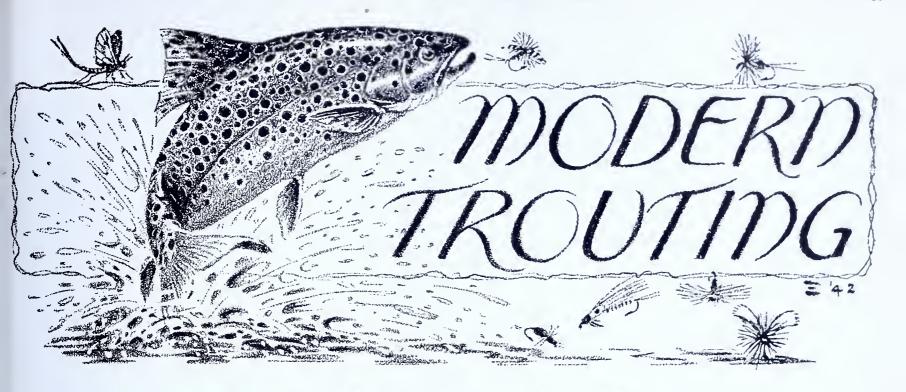
"Oh! I can explain that," answered the other. "When one of these men would start to go with one of my girls I would chase him off the place and tell him not to come back anymore. Then I would talk to the girl and tell her to keep away from that fellow. In two or three weeks, they would sneak away and get married."

The father of the pretty girls admitted that he must have made a mistake. "When one of the men came to our home mother and I made things most pleasant and we tried to do the courting."

"You see," said the Justice, "It is the restriction of the human will. When you tell people there are fishing restrictions they all want to fish. When they obtain their licenses, they want to get their money's worth, so they stick to it."

About this time carp were introduced into our waters. They became numerous, uprooted the vegetation, soiled the water and ate the spawn. Some think that eels help destroy spawn, but this I doubt, because in the days of great fish plenty, there were

(Continued on page 19)



DRY FLY FANCIES

By CHARLES K. FOX

TROUT frequently drown a dry fly or rise to it without touching it. Such fish will often turn about and solidly take the same pattern of fly in a smaller size if it is presented naturally.

Possibly the best imitation of a midge is a small badger hackle tied on a No. 20 hook, Such a fly has a black core and light perimeter. Could it be that the light colored hackle tips give the appearance of buzzing wings on a small dark natural?

A floating leader in clear quiet water is an abomination; in fact it is a double abomination. The leader itself and its shadow are visible to the trout, and what is probably more vital, a floating leader causes the worst kind of drag.

Most of the time a high riding fly seems to be more effective than a sodden one. It seems practical to change flies every now and then to obtain better floats. It is advisable to tie on a fresh fly when a particularly good rising fish is spotted. Keep "'em on their toes."

There are two schools of thought among dry fly fishermen. The one group feels that it is important to match the hatch in size and color with the artificial. The other group feels that trout cannot distinguish color or at least shades, so they advocate subdued patterns in the right sizes. Both systems work, but which affords the better and more interesting fishing and which affords the more interesting and satisfactory time of it in assembling an assortment of flies?

The most desirable fly fish in our average trout stream is the 12 to 15 inch brown. The inveterate angler should either return all the little ones he catches and keep a few of the best or he should keep a few 8 and 9 inchers and return those most desirable for his sport. Fred Everett practices the latter when he does keep any trout, which is seldom.

When a trout takes a dry fly the angler must strike back, but his answer to the fish must not be fast and hard. "Easy does it."

It is not necessary to keep a tight line on a good fish right after it has been hooked. Play them from the reel. If early in the fight the fish comes in faster than the line can be taken up that's all right. It is not necessary to strip in line to keep pace with the fish. Dangling lose line can cause trouble -Don Martin knows.

The real thrill to many fly fishermen is the "hooking and feeling the fish for size." If the trout is small, and most of them are, the playing is mechanical and secondary.

The greatest pleasure in dry fly fishing is to cast over rising fish. The greatest problem is to take fish when there is no surface activity. George La Branch, author of "The Dry Fly and Fast Water," advocates the theory of creating an artificial hatch and thus stirring the trout into activity.

He chooses a likely place for a trout to be located. After carefully moving into the proper casting position he casts to a spot and drifts his fly down a certain channel. This he continues for a number of casts and he is careful that each cast is right. A trout may become interested in what appears to be a hatch. The fish may act accordingly by assuming a feeding position. This is the critical stage and one bad float will make the fish suspicious and spoil all the ground work of the angler.

Jack Knight has what he calls "fish finders." They are large dry flies which he employs when there is no rise. When a trout comes to one of these large flies, but at the last instant refuses it he switches to a smaller standard pattern and often takes the fish. His two favorite finders are the George Harvey and the Bi-visible Brown Spider. (He gave the specifications of these flies on page 16 of the October ANGLER.)

Why do so many dry fly fishermen insist upon casting up stream? Sometimes it is to the fisherman's advantage to cast cross stream or quartering down stream. Some spots must be fished this way if they are to be fished at all.

If a hooked fish is really a good one, don't advertise to him the fact that he is hooked and in trouble. Permit him to cruise around to suit himself. Time is all in your favor. Panicky action by the fish while it is still strong is in the favor of the fish.

Suppose a good trout is rising down stream in an impossible spot to which to cast. Try hooking a Fan Wing Royal Coachman or a large spider lightly to a leaf and float it down to the fish. When it reaches the desired spot twitch it free of the leaf and permit it to float. If nothing happens drag it or twitch it a little. This of course is not infallible, but it does bring forth action on occasion.

If there is no room for a float where a fish is rising it is worth while to cast into the spot and drag or twitch the fly away from the obstruction.

Some of the limestone spring streams of South Eastern and Central Pennsylvania must be very similar to the English chalk streams. It is strange that they have not received more widespread attention from the anglers.

Some fishermen think that spiders are at their best in the wind. At times gusts of wind roll them on the water or pick them up and gently place them down again. When the setting is right it is worthwhile to get the wind at your back so that you can give this realistic fly action a chance to perform.

Late in the season good trout rising in quiet water readily take a small Tupp's Indispensable, and refuse other small patterns. What is the answer to this one?

Dry flies with mixed hackle are comparatively new. They descrie our attention. In this group are: Adams, R. B. Fox and Grey Fox. Probably the credit for their existence goes to Ray Bergman. They seem to be more translucent than the one color hackle.

The old English horse hair bodies look wonderful. It is high time American trouters give them a better break. The tying of this body is tedious and therefore such flies will (Continued on page 16)

STUFF 'BOUT STREAMERS

BOB FREDERICK

THE most consistent fly rod lure for big fish is the streamer fly. Flies of the streamer group are tied to represent minnows—the favorite food of all tackle busters. The lure must therefore be handled to simulate the lively darting antics of a minnow—and it's an easy art to master.

A medium stiff rod, about 8½ foot long, weighing around 4½ or 5 ounces, serves nicely. As for a reel, either a single action or an automatic will do. Many anglers are partial to the automatic for streamer fishing. A good oil—processed level—line, size D or E, will prove satisfactory, or better yet, a tapered line, something around size HDH. During the early part of the season, when waters are high and discolored, level leaders of 6 lbs. in 9 to 12 foot length are in style, with tapered leaders coming into their own when the warm weather arrives. Get together a good assortment of streamers and your all set—for fish.

Contrary to popular opinion, the streamer gets 'em the year 'round. Tackle and lures must naturally become finer in proportion to the conditions in which one is fishing. Streamers are not only effective for trout, but prove deadly on bass, pickerel, wall-eyes, and other panfishes.

The term streamer includes any fly which

represents a minnow. The family includes the: feather streamers, which all have hackle feathers as wings; the bucktail streamer, commonly known as 'bucktail', all have the popular hair wing like the yellow tiger, mickey finn; and squirrel tails. The marabou streamer looks like something off the wife's new hat; the wing is composed entirely of plume. The wiggling, enticing, action of the fragile maribou accounts for many fish taken on this type of streamer lure.

A small spinner in front of the fly often proves effective, but the fisherman must take care to buy straight-eyed hooks if he intends to fish streamers with a spinner.

Wiggle discs may add to the attractiveness of the lure. They resemble the metal cups on the front of diving plugs, and add an enticing action to the streamer. In using the discs, dress the fly extra lightly, or the cup will have little effect on it's action.

Many heated arguments have raged over the comparative merits of glass eyes, painted eyes, and jungle cock eyes. The article entitled 'Streamer Fly Experiment' by Charles H. Amann in the Angler, January 1944 gives conclusive proof that the glass eye holds the edge over the others.

An other controversial question is the matter of hooks. Some tiers prefer the extra

long shank, claiming that most strikes come from behind. Others prefer the barb about midpoint on the wing, claiming an equal chance of hooking both early and late strikers. A few fellows tie streamers on extra long shanks, then tie a No. 10 wet fly hook immediately back of the head of the fly. A good percentage of the fish are taken on the front hook. Others tie the fly on a medium shank hook and follow up with a trailer hook, fastened to the main shank either by a piece of nylon or of wire.

Highly effective deep running streamers are tied by first wrapping the hook shank with heavy wire. Flies for use with spinning outfits are tied in this way.

Unweighted streamers may be fished deep if a piece of strip lead is wound on the leader. Strip sinkers are superior to buck shot, for they cause less splash and commotion.

Variety of patterns is unimportant. Listed here is an assortment of patterns which, in a variety of sizes, should prove the Waterloo for many a fine fish.

Yellow Tiger

Body—Peacock herl Throat—Red Hackle or impalla tail Wing—Yellow bucktail Tail—Gray mallard, pintail or teal breast

Mickey Finn

Body—Flat silver ribbed with oval gold tinsel Wing—Yellow bucktail with band of red through middle

Shoulder-Jungle cock

Black Ghost

Body—Black chenille
Rib—Silver tinsel
Hackle—Yellow
Tail—Yellow hackle fibres
Wing—Four white saddle hackles

Black and White

Body—Red wool Rib—Flat gold tinsel Wing—White topped with black bucktail

Catskill

Rib—Flat gold tinsel Wing—Brown bucktail Throat—White bucktail, tied as long as wing

Yellow Marabou

Body—Silver ribbed with gold tinsel Wing—Yellow marabou with a few peacock herls

Yellow Breeches

Body—Gold tinsel

Body-Red wool

Wing—Yellow topped with brown marabou

Black and White

Body—Silver tinsel

Wing—White topped with black marabou

All these patterns may be tied with glass eyes, jungle eyes or painted eyes.

The streamer fly enables the amateur tier to exercise his imagination and still get results. Any lure resembling the general conformation of a minnow will enjoy limited success, but the standard patterns have been found to be the most consistent fishgetters.

Up to the age of sixteen a lad is a Boy Scout; after sixteen, he's usually a girl scout.

Mary had a little lamb—you've heard this oft before—

And then she passed her plate again and had a little more.



"It was a great fight but I got him!"

CRACK TROUT FISHERMAN TELLS HOW TO CATCH THE BIG ONES

You won't have to dig up that old story about the biggest fish getting away, not if you fish the Dick Miller way, according to Paul Zimmerman in his article, "How to Cast a Trout Stream" in the August issue of "Esquire." Dick Miller, winner of many fly casting titles, has a formula for trout fishing which includes thermometers, light meters, test tubes and even statistics on the homelife of water insects. And the way Miller does it results in more sport to fishing and more fun in fly-casting-especially since he gets the results that you can fry in a skillet and show to doubting sports-minded friends, Esquire points out.

Miller's studies have convinced him of certain things which blast many fishing fables. He refutes the "fish biting in the light or dark of the moon" theory as just so much false superstition. Direction of wind and air temperatures make little difference to the fish and should bother the fisherman even

less, says Esquire.

According to Esquire, Miller's formula, boiled down, is to find out where trout are, what they are feeding on and present these insects in reasonable accurate facsimile. Expensive equipment won't impress the fish, according to Miller, who has \$8,000 worth of equipment, obtained for experimental purposes, and personally uses a fifty dollar set of rod, reel and line. Miller's philosophy on rods and reels can be condensed to the point that if you don't know (1) the habits of trout, (2) the most intimate love and family life of lake and stream insects, and (3) proper mechanics of casting, the best equipment in the world won't help you catch

To give you an idea of Miller's ability, he can flick the ashes off a cigarette at fifty feet and can cast a five-ounce plug between the goal posts the length of a regulation football field with a light bait casting rod, says Esquire. In casting, Miller considers accuracy the first item of importance but only a fraction above distance. They go hand in hand, he insists. But he also brings out a few tricks in the sport that lures trout to the fly. For instance, by different actionization he simulates the movement of the type of fly he is using. And what if the fish are not feeding on insects? He has an answer for that, too, in turning to the streamer fly, for if Lock Leven are in the stream, the streamer resembles the colorful Rainbow, Esquire points out.

But according to Miller, you can accomplish all the fine points of casting and actionizing the lures and you still might come up the loser in the game if you overlook the part that light rays play in the game. That's why he takes a light meter along on his fishing trips. Miller recommends that you fish early in the morning or late in the afternoon, says Esquire. A direct sun makes you a striking target from a fish-eye view. The amount of shade covering a stream, and the clearness and depth of the water figure into the problem.

You may think this is going at the business of outsmarting a trout the hard way, but Dick Miller says the thrill as well as the frying pan satisfaction you get out of it more than repays a fisherman for his effort.

-Bellefonte Center Democrat.

PINEY CREEK

P INEY Creek rises in the vicinity of Martinsburg in Blair County and flows along Loche Mountain to Clappertown where it is joined by the Poverty Hollow Stream. From the confluence of these streams Piney Creek first takes on importance as a major trout stream. While both of these tributaries are fished somewhat, it is from Clappertown to Ganister where Piney Creek joins the Frankstown Branch of the Juniata River, that the stream gets its eight miles of listed fishable water.

Two fine feeder streams, Royers Run and McAllisters Run empty into Piney Creek at Rover and as both are fed by giant springs, they maintain a steady flow of good pure water.

The stocking of fingerling trout, received from State and Federal hatcheries in these four feeder streams furnish a good supply of thrifty trout to the main stream. The fish when first noticed are about five to six inches in length and are highly colored, it isn't too difficult to tell these small trout from the ones freshly stocked from the hatcheries. A good many fishing friends believe that fish reared in this manner are well able to battle the elements and fisherman.

The rate of reproduction of trout in this stream is very good and fellows seining bait fish or minnows find many trout from one to one and a half inches in their nets. As there are no trout of this size stocked in the main stream, natural reproduction is the source of these fish.

A plentiful supply of crayfish, minnows and other small bait fishes, as well as most aquatic life common to Pennsylvania waters, produce trout far beyond what one would expect in a stream the size of Piney Creek. A twenty-six inch brown is the largest trout to come from the stream and was taken on a minnow by Mike Conrod of Ganister. A picture of the trout and lucky fisherman appeared in the ANGLER a few years ago.

The artificial touch noticed on Piney Creek was sponsored by the Williamsburg Sportsman Association and the work was begun in 1935. Members of the club donated the labor and trucks. Stone quarries gave all the stone needed. The only cost for material was for logs, slabs and nails needed to build Hewitt or Deibler type dams. We called them slab

The committee appointed on this project made a trip to the Fisherman's Paradise near Bellefonte to see stream improvement at its best. With this knowledge as well as leaflets received from the Fish Commission on stream improvement, a survey of Piney Creek was made to see what could be done to improve the fishing.

The first day for work on the stream was to be a picnic affair with all refreshments furnished by the Club. We were pleasantly surprised to see the large turn out of able and willing workers. Seventy-eight members were present at the height of the day, many of these boys had never done any fishing.

Lincoln Lender, our fish warden at the time, was the first man on the job and the last one leaving. He was a great help with the work and his suggestions were carried out as far as possible.

Stream improvement was in its infancy at that time and I believe this was the first organization to undertake this work in the State. The Commission sent a representative to go over the work and it was found that about four miles of stream had been improved. Most of the improvement was built of stone. Slab dams built at this time had not been in long enough to create the desired results. Finally they went out with the St. Patrick's Day flood of 1936. Much of the other work was washed out or covered up.

Small groups of interested fishermen have banded together to replace much of the improvement lost in the flood. One of the slab. dams replaced at Wertz in 1937 has stood up well and is a real investment when one considers improved angling.

Each year finds more of this work repaired and by concentrating our efforts on stretches of water that afford little or no fishing, we have increased the carrying capacity of the stream. If some of the work back fires, as it does at times, we haven't ruined any of ourgood water.

The two improvements that stand out in our stream are, large rocks that the high water doesn't push around and the slab dams, we wish we had more of these. The willowshoots planted near the stream edge furnish cover and food for the trout.

The stream affords good bait and minnow fishing in early spring and through out the season, when water conditions warrant it. The boys who follow this type of angling account for a large part of the good trout that are taken on the stream, nevertheless, it is as a fly stream, Piney Creek appeals to a great many fly fishermen. It is a rare casewhen the stream remains muddy for long periods of time, due to the strong springs and rapid descent.

It was to this stream that the shad fly of Clover Creek was transplanted, and whilethere are no large hatches, there are always some scattered flies and a few fish are taken on the artificials. We have hopes that the shad fly will assume importance.

Large hatches of small flies are dependable and most of the major hatches lean to the light gingers. A concoction worked up by one of the boys, called Piney Creek special is a variation of the Light Cahill and it works well.

I would consider myself well armed, with a few of these dry flies in sizes 12-14-16 and a female of the same size 14. I have never found a large selection of dry flies necessary for this stream.

The dressing of this fly is as follows: a few wisps of light ginger hackle for a tail; body of light natural raffia; the lightest ginger hackle and no wings. We often tie a ginger and white hackle on together to get the effect as light as we like it. To this a turn or two of orange chenille is added in making a female. This will make a lot of difference in results some evenings.

As for wet flies most of the small ones in the more somber colors work well. One old wet fly fisherman of my acquaintance asserts that if he can't get 'em on a small black gnat he might just as well be home.

Those favorite patterns of yours will probably work better than the ones mentioned here but if you tie your own or have a friend that does, try and have a few of these specials. It will be a little extra insurance of a good evening of sport.

Tight lines when you visit Piney Creek, the ideal fly stream and may it be as kind to you. as it has to my fishing friends and myself.

BARESARK

(Continued from page 4)

That night, at dinner, I looked across the table at a wistful little girl in a starchy dress, eating children's pap and thrilling at the prospect of ice cream. A great pride was in mc and I fear that the only limit on ice cream that night was her ability to eat it. Then we went into the lounge and I sought a book for her from the shelf of well-worn volumes.

"Here's 'Treasure Island'," I said. "You'll like that; remember, I started to read it aloud to you kids last winter."

She shook her head. "I don't want it, Daddy," she said in her soft, little-girl's voice. "It's too slow. You know—there isn't enough happening. May I have this one instead?" and she held up another book. I glanced at it; the cover was impressed with an illustration of fighting pirates, and the blazoned title was "Bloody Cutlasses"!

While she stacked herself intricately into a corner of the settee, I took the "Fishing Gazette" and lit my pipe, but I could not read. I was thinking of the time when I, too, ran baresark among the warriors, chiding them with taunts and calling on them to come to me. I glanced at my sweet little girl again and reflected that she would soon be a woman. Then, I reflected, some thicknecked young thug will marry her and take her away from me. I meditated on it for a while and was presently astonished to realize that I pitied that unknown young man.

LETTER TO THE EDITOR

(Continued from page 1)

flies with which he claimed he killed some large trout over in Jersey. I made and tried some of them but for some reason or other I was not able to produce with them. That seems strange since his name is also Fox.

Well I am sending you the reconstructed Bass Bug Article which I hope will receive your O.K. Hoping I may be able to get in to see you before long, I am,

Sincerely,

CLAYT PETERS, Lykens, Pa.

DRY FLY FANCIES

(Continued from page 13)

cost more and are more difficult to tie, but if this is an improvement it is a step in the right direction. This material makes a beautiful, dainty, translucent body and presents a wide color range. Some prophesy they will become popular and common in due time.

Gold plated hooks may improve the effectiveness of certain flies such as the Pale Watery Dun.

Billy: "Dad, can you help me with this problem?"

Father: "I could, but I don't think it would be right."

Billy: "No, I don't suppose it would be—but take a crack at it anyway."

AFIELD AND ASTREAM IN ERIE COUNTY

With John Crowe

Sitting idly in a boat,

Watching line and cork afloat

Over that I ne'er can gloat,

It just simply gets my goat.

W. E. DIMORIER

Now if that isn't a heck of a way to begin a fishing column, what is? But in the letter which brought the above lines, Mr. Dimorier was more tolerant; he even went so far as to call fishing an art, which of course, it is. If it appears as such to outsiders and mere onlookers, think what fishing must be to its practitioners. Then it is easier to understand some of the strange things which fishermen do at this time of the year. For instance:

You will recall that about a week ago we had some very mild weather. Well, one day the telephone rang. We managed to outsit the better half, and she answered.

"It's for you," she said. "Someone who's all excited about something."

The fellow at the other end of the line was excited. He had news that was news! And how! He had been out in his back yard, raking up the skeletons of last year's flower garden, and he had discovered that the earthworms were at the surface! In February! He was so elated that he jeopardized his gasoline ration book to bring over half a dozen nice fat night crawlers to show us, just in case we were skeptical! For that fellow winter ended when he saw those worms. You see that fishing has many returns that cannot be put on scales.

Fly-Tying

Another manifestation of fishinsanity: Flytying. We know a fellow whose time is valuable, good for at least five dollars an hour, in good hard cash.

During most of the year he is willing to put in a full working day but around the first of March he begins to sneak out early and make excuses for not coming to work on Saturday morning. For six or eight weeks before trout season he simply cannot work on Sundays, or legal holidays, or any other day when there is the ghost of an excuse for not working.

The reason for all this: Fly tying! The flies he ties are pretty fair, but nothing extraordinary. You might pay 25 cents for one at a tackle counter, but you'd certainly balk at 35 cents or \$3 or \$4 a dozen. How many flies can he tie in an hour? If he hurries, he can average one! One 15 cent trout fly produced in \$5 worth of time.

Wasted time? Not by any means! That fly is worth five dollars. Maybe not to you, but certainly to him. He will have 10 or 12 dozen new flies ready for April 15. Figure it up, at the rate of one fly per hour. You will realize at once that here is an angler who has not lost his sense of values.

"Tackle Squirrel"

Another angler type often misunderstood by the ordinary person is the tackle squirrel. He buys every new gadget that comes out. Sometimes he uses what he buys; more often he does not. His wife thinks he's nuts; the tackle salesman thinks he's Santa Claus; and he thinks the war will be over tomorrow so he can go back to normal. These are bad days for him, but he's in optimistic correspondence with the war department in an attempt to get one of the shipwreck fishing kits (see Life, dated March 1). Not only that, but he is virtually assured of a rubber raft after the war ends. With such major acquisitions in the making, he often can afford to overlook the disappointment of not being able to buy any new model reels, rubber boots, or what have you.

Trip Layouter

Finally, there's the trip layouter. If you have never encountered this variety of angler, you've missed something. The war has been a field day for him. Now he can plan trips to a lot of places he never before thought of, and hold an audience which is inevitably impressed at hearing him talk of fishing at places in the news of the day. The trip layouter has lots of maps. He answers advertisements. He is a piscatorial Marco Polo, and he really enjoys himself, winter or summer, peace or war.

Take the Alaska highway. We know a fishing trip layouter who has been over this highway six times this winter, and he is just beginning to work over the possibilities. He has the waters along the highway pretty well fished out, and he's now getting in some side-trips. When the weather gets a bit too Alaskan, all he needs to do is reach for another map, and he's catching lungfish in Equatorial Africa. That's a lot of fun, too. Try it some time.

-Eric Dispatch Herald

Elimination of Poison Ivy Urged

Spring and early summer is the best time of the year to eradicate poison ivy, the State Department of Agriculture states.

Poison ivy is most readily recognized by its leaves which are always divided into three leaflets ranging from two to three inches wide to four or six inches long. It has no known economic use and its eradication is urged by the Department of Agriculture.

The pest plant grows under a great variety of soil conditions and in the form of woody vines, trailing on low erect bushes. It may be killed by grubbing out the roots as soon as the Spring growth appears or by close grazing of sheep in fields where it occurs.

Sprays too may be used to kill the plant. Some commercial preparations are available but they are fatal to all plants and care must be used to prevent killing other plants. Another effective killing agent is sodium chlorate spray using 10 ounces to one gallon of water. This has the disadvantage of making anything it touches highly inflammable, creating a fire hazard. Due to the war a special permit is required to possess this material legally.

Common table salt, three pounds in one gallon of water may be sprayed on the leaves. Regardless of the spray material used it is necessary to spray any sprouts which may come up later in the season. Borax is a successful remedy when used over the ground where poison ivy is growing. It should be used at the rate of 10 pounds to each square rod. Some other plants will not tolerate as much borax. Trees three inches or more in diameter usually are not harmed.

FORKED-TAIL CATS

(Continued from page 5)

I once caught a 16 inch channel cat that contained a 6 inch larva of the "hickory horned devil," Citheronia regalis Fab., the largest of our American lepidopterous larvae. Among other things found in these fishes were an acorn 3/4 of an inch in diameter, a 3/0 japanned steel fish hook, seeds of trees, shrubs and weeds, algae, minnows and grasshoppers. But the strangest find of all was a cluster of Californian "Thompson seedless" grapes! After a June flood, I also took a two pound blue catfish that had swallowed a nestling cardinal grosbeak. Now, I do not contend that the fish had climbed a tree after this bird-but he might have done so had he thought of it? The hapless bird doubtless had fallen out of the nest and was then engulfed by the ravenous fish.

This seems a good place to talk about catfish baits. Very early in the season the standard bait, used by dyed-in-the-wool catfishermen, is shad entrails, vulgarly yclept guts. Later on, cut minnows or little silvery ones, alive or dead, crammed several on a hook. Still later, an effective and popular bait is fresh water mussels of the genus Anodonta which abound in the Potomac System, and which the big cats devour in nature by crushing their thin shells in powerful jaws. Of course, there are also such smelly concoctions as sour clams, limburger cheese mixed with absorbent cotton, and chicken guts. But such horribilia are uncalled-for, and why render the perfect sport painful to the olfactory organs?

My personal choice of baits in season are night crawlers, a generous gob placed on a 1/0 hook. Then later, and better than all, are grasshoppers. Now, you may search the literature of catfishing in vain for mention of hoppers for catfish bait but, in summer and fall, they are unexcelled for this purpose. I use a 3X shank, model perfect hook, size 1 or 1/0 and cram on as many hoppers as it will hold. Impale them through the tail and bring the hook out through the forehead. This prevents their being flipped off



A 17 inch catfish caught by W. R. Walton. Good baits are: chicken entrails, flayed squirrels and chunks of stale tough meat.

readily in casting and also protects the bait from minor assaults.

My friend Dr. Frank Craighead, a native of Cumberland County, was successful in preserving grasshoppers for use as catfish bait. He had them collected in bulk in the West, placed in a burlap sack and then dipped for a minute in boiling water. The hoppers were afterward laid out thinly to dry and placed in a cool place until needed. When wanted for use, the desired quantity was folded into a thoroughly wet newspaper over night, thus rendering them pliable. Thus treated they are a little tender but samples given me proved both practical and attractive. Another good bait, the use of which I believe is original with myself, is the troublesome bagworm frequently seen defoliating such trees as arbor vitae and black locust. This insect when full grown in August, and extracted from its shelter, resembles closely the larvae of the larger caddis worms (see figure). The trick of extraction when mastered is not difficult. You simply pinch his tail gently until his head emerges from the bag, this is firmly grasped, and a quick jerk does the rest. Not only have I taken many a fine catfish on these worms but not seldom good smallmouth bass.

Twice during the past 30 years, when there was a wholesale emergence of the 17-year cicada or "locust," in the Potomac Valley, I have found both the catfish and the bass gorging on them. In fact it was then difficult to attract them to any other bait. However, this is what one might call an occasional tid-bit-at most not to be depended upon constantly.

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In fishing for the fork-tails it is best usually to allow them to run with the bait



before striking. But as their mouths are tough, the strike should be hard enough to drive home the hook. While the water is warm, they usually strike vigorously and then run swiftly but they behave quite differently during the cooler months. The bite then may be very timid and patience is required in hooking them. Experience convinces me that these cats smell, taste, or otherwise sense, the baits while lying downstream and swim upstream to locate it. This explains the use of the odoriferous baits so often recommended. The channel catfish is by no means confined to large streams but habitually roams in summer up rather small tributaries, then descend to the main river in the fall. The accompanying photograph (Fig. 1) illustrates well a small, swift, rocky stream from which I have taken literally hundreds of these fish during the 10 or more years that I fished it. The string exhibited (Fig. 2) by my son, Bill Jr., shows a typical day's catch for a party.

(Continued on page 20)



Good catches of forked-tails can be made from small rocky streams.

An Experiment With Artificials

(Continued from page 7)

of the day. May the fishing gods favor me! Because if they do I know that there will be a new convert to the use of artificials. But why the sudden change? It seems rather odd for such a reversal of form for a stubborn old mule like you."

I could not keep back a smile as I replied, "Well, I figure I have nothing to lose. The trout seem to be off their feed today, and maybe I can be used as proof that an old dog can be taught new tricks. By the way, what's the first offering on the menu?"

Jack was all business now. "Here, take this rod, and there in my tackle box you will find a tapered leader, and of course your new HDH line will be just the ticket for this work. Rig the tackle, and join me down at the first bend. I've just bent on a new brace of wets, a mallard quill on the point, and a dark cahill on the dropper. Here's hoping that business improves."

When I pulled Jack's trout tackle box to the front of the trunk, I accidentally bumped it against some kind of a metal sheeting which gave out a loud jangling sound when it collided with the box. Pulling off a blanket that partly hid it, I saw to my amazement the large green tackle box that Jack used as a depository for his bass fishing tackle. Behind it was also revealed the shiny aluminum carrying case for his casting rod. I must admit that I scratched my head in amazement. What did he have up his sleeve that caused him to secretly harbor bass tackle while angling for trout? He had never done anything so unusual before.

Now I realized why the car trunk seemed fuller than usual this morning while I was stowing my gear prior to leaving. I had never during all of the years that we fished together, known him to bring his bass tackle along. Maybe he had left it there since our last bass and walleye excursion the previous summer to Lake Wallenpaupack. If that were the case though, why the concealment? I made up my mind then and there that if he did not broach the topic neither would I, because all I would likely receive to my query would be one of his slow smiles.

While this train of thought was running through my mind, I had been busily engaged joining Jack's other rod. My new HDH slid with ease through the guides, as I false cast the rod to get its feel. In no time I had one of his eight foot leaders tapering from 9/5 to 1X attached to the line, and brimming over with pessimism I slowly proceeded to join Jack at the first bend below the bridge.

Parting the willows that bordered the stream so thickly along this stretch, I saw Jack standing knee deep in the water on a sand bar that extended about seven or eight feet from the bank on the side that I was standing. He was casting his brace of wets across and slightly upstream, allowing them to float without any drag or manipulation from the line and rod. After completing a full swing he would retrieve in short jerks for several feet, or vary this procedure by drawing in about a foot of line with his thumb and forefinger and then letting go of it suddenly. Then he would again repeat, gradually extending more line across and

down enabling him to thoroughly cover that section of water.

On about his fifth cast, just after the line had straightened out as it swung across stream, it became suddenly taut, to which Jack responded by flicking his wrist, and the battle was on. Scarcely had he set the hook, then wham! Out flashed Mr. Rainbow three times in such fast successions that counting one, two, three would have covered the time that elapsed from his pulse stirring emergence until he decided to fight it out in his native element instead of again becoming interested in aerial acrobatics. Slowly but surely his game heart was being subdued by the never yielding arc of bamboo, and several minutes later Jack and I stood admiring the sleek, irridescent sides of a fifteen inch rainbow.

Jack broke the silence by requesting: "Say, Al, how about whipping the stretch right below? Tie on this number ten mallard quill, as that seems to be the taking one. Hurry, because they might only rise for fifteen minutes, and then again they might stay on the feed for an hour or two."

"But when do I strike? What if I miss?" I asked, all the doubts of a bait fisherman against artificials flooding over my new resolve.

"Listén, Pardner," pleaded Jack, "just take my advice this one time and give it a try. Learn by doing by trial and error, and you'll not regret it. Give it some of the patience you have given to that bait fishing of yours."

A grim resolve took hold of me, and with a determined air I started fishing below Jack. On the third cast just as the line was beginning to straighten out there was a sudden flash as the spray flew, and the line tightened for a second. Instead of giving the rod a slight upward flick with a turn of my wrist, I just stood there with mouth agape staring at the spot where the trout had struck. To the hunter it is known as buck fever-to me a fisherman it was just plain paralysis. "Say," I said half aloud, "This artificial approach must have something that bait doesn't possess. I never got as much kick out of catching a nice trout on worm, as I did at the strike of this trout to my wet fly which I did not catch." Then I hastily looked around to see if anyone had heard me talking to myself. But fortunately no one was nearabove all Jack.

It did not take me long to realize that I was due for many disappointments before I could master to some degree the setting of the hook at the moment the trout struck. This I found took close attention, and constant alertness on my part. The next trout that struck, a nine inch brownie, hit the fly so hard that since the line was semi-taut he practically hooked himself. Say, was that fun? Not having a bait hook half way down his gizzard with a weighted leader in addition, but with only the light fly imbedded in his jaw, did he tear up and down that pool.

Two hours had never flown on gossamer wings as quickly as these had. By the time Jack's faint "Hey, Al! Come on, let's eat!" had come faintly down the creek, I had had five more rises, with four misses but had been fortunate in striking and landing a rainbow about a foot long. After he had felt the barb and had made his first leap and run, I believe that my temperature rose five degrees so exhilerating was the moment.

I creeled the trout, and stood for a moment silently admiring my first two trout caught on artificials before starting back to rejoin Jack. As I walked along it slowly dawned upon me that I had been missing a lot of fun all these years, and hadn't had even a faint realization of it until today's eye-opener. From today on as far as I was concerned the worms, grubs, and grasshoppers were going to get a long vacation. Jack with his feathered lures surely had won an ardent disciple to his side.

This train of thought was interrupted by the sight of Jack busily engaged in taking

apart his rod.

"What! You're not quitting already are you?" I hastened to ask. "Why we have at least an hour and a half of daylight remaining. You know it's not everyday that we can get here."

"No," he replied as he proceeded to stow away his rod case. "But I think it is about time for a sandwich and a cup of tea. There's my catch by the tree there. I netted twelve but I only kept four because they will furnish me with all the meat I want. By the way, did you get disheartened and return to worms again?"

"Artificials have been such a revelation that I forgot that worms ever existed," I

said.

A slow smile creased Jack's features. "I'm sure you'll never regret it. I feel amply repaid by that remark of yours for my efforts in trying to convert you to this point of view."

"By the way Jack, why did you put away your rod? I was just about to ask you whether you were going to give some of those newly tied streamers an early spring workout."

Unwittingly I had left myself into the secret of the bass tackle box. Without having to ask what it was doing in the trunk on a trout fishing expedition, something I had resolved not to do anyhow, I was being told the answer without having directly asked for it.

Trying to be nonchalant he replied, "No. Al, I'm not going to try streamers for the remaining time. Nor am I going to continue with the wets although they have been highly successful today. Do you remember my calling your attention to a fishing article in a magazine about a certain fellow who caught big trout on bass plugging tackle? Well, ever since I read about it I have used it quite frequently as food for thought during some of the long winter evenings. Maybe you noticed my bass tackle box back in the corner of the trunk? I made up my mind that I would take it along on my first trouting trip this year and give the plugs a try. I figure if that fellow produced out west semewhere on a stream comparable in size to this one which we are fishing there is no reason for not producing here. After all there are some old-timers hereabouts too."

"I might have given you the old horse laugh if you would have talked this way last year Jack, but after today's events I feel that anything can happen."

Jack by this time had got his equipment ready. The past summer he had purchased a five and one half foot tubular steel rod of medium weight—just the thing for half ounce plugs—one of which in a perch finish he had just fastened to his four foot leader—and was making final preparations for going

(Continued on next page)

An Experiment With Artificials

(Continued from page 18)

to the stream. Gone was the apologetic doubting air. Jack was again his old self as he replied, "How about bringing your landing net, Al, because Lady Luck might greet us with a big smile, and then again she might frown. You never can tell."

I lost no time in complying with his request, and was close on his heels as we hastened toward the big pool at the bend below the bridge.

Whir-r-r went the reel as Jack sent the plug sailing to the still pocket of water on the opposite side. He did not aim at the spot where he hoped to make contact with some giant trout where the current merged and dimpled in whirl-pool-like eddies with the deeper water, but beyond it so that the plug would be well down near the bottom when erossing the stream bed at that point.

"Dog-gone," Jack was muttering to himself after he had reeled in about ten yards of line. "I would have to go and get snagged on some old tree limb or something. Oh well, it's not the first plug I lost, nor the last for that matter."

In disgust he gave the line a sharp jerk hoping to either free the plug or break the line which only tested twelve pounds.

Jaek's rod suddenly came to life because the obstruction proved to be a he-man trout. The line eut the water so fast as he tore up and down that pool that it left little wakes behind it. The battle lasted about ten minutes before the unrelenting pressure of the rod gradually gained the upper hand. Not once did he break water, but I believe this was mainly due to Jack's skill because when he would roll with the plug about a foot beneath the surface Jack would cautiously ease the tension to allow him to bore deeper. The last thing he wanted was to have that trout break the surface and use his tail as a lever to shake the plug from his lip.

When he first came near the top his spots looked as big as dimes. "Hold him, Jack boy, hold him!" I yelled feverishly. "He's a beauty. Boy if you lose him woe to you."

Now it was my turn to quake. Jack by now had the brown warrior starting to turn slowly on his side. "Get the net ready Al, and when I lead him over it take him head on."

I licked my dry lips and thought, "Here's where one of those life long friendships hang in the balance because if I lose this fish through clumsy netting I'm afraid Jack will give me back to the Mohammedans. But it had to be done." When the net was about a foot away Mr. Trout made one last desperate lunge but Jack was ready, and he soon led him again toward me. Steeling myself I scooped, happily successfully, and for the next five minutes, after first killing Jack's prize, we eyed that trout from stem to stern. If that fellow in the story about the Western trout plugging found his first attempt as highly successful as ours no wonder he was enthusiastic. Mr. Trout measured twentythree and one-half inches, and later topped the scales at four and one-half pounds.

There have been larger brown trout caught than this one but for symmetry he was per-

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FISHING IN REVIEW

(Continued from page 12)

many eels. In my early fishing days, it was possible to take fifty to one hundred eels a night on one outline. When I left Wyalusing in 1925 you could not catch ten eels a night.

I am a member of the Izaak Walton League Chapter of Wyalusing. For sometime we stocked the river and streams with small fry but it got us nowhere. Since that time larger fish, brood stock, have been planted and fishing seems to be improving.

Our hatchery improvement has been great and things seem to be on the up grade. With so many boys in the service and with gas restrictions, our fish supply should improve. The stocking program must continue.

Our future fishing depends upon our own activity. We can do more by limiting kills than by any other means. In some of the recent journals I see pictures of men transporting deer and bear, which they have shot, by plane. After the war when autogiros and helicopters are in use, hunters and fishermen will go almost anywhere in a short time. There will be greater fishing and hunting pressure and many new nimrods. It is then that we must be careful and reasonable and not harvest more than the true surplus.

When fish first became scaree here one could go to Michigan, Minnesota and Canada and catch plenty, but lately these places have become over-fished. The automobile made the first great difference and the aeroplane will make the next. The Bible states, "man shall destroy himself, by his own devices". Man's devices caused the loss of the buffalo and antelope from our western plains and caused the fish to disappear from our lakes, rivers and streams. The question of the future is, will we use good judgment to conserve, or will we kill and destroy needlessly.

Sometimes conservation is practiced in a peculiar manner. A man from Wyalusing told me that he and three others went to Casson Brook to camp and fish a week. When they arrived at their destination they were greeted by a man, a native. Playing the part of the perfect host he insisted that they join him in a "sweet drink."

From the cellar he fetched a pail of liquid refreshment. Each was given a glassful with the assurance, "it is only sweet, gentlemen." They each partook of the mild tasting drink. The host insisted that they have another, which they also drank.

They then proceeded to their site to pitch camp. The tent was no more than put in place when the bees began to buzz in their bonnets. That sweet drink, made from honey, held sway for the week. Not a single trout was taken.

If you chance that way be careful not to imbibe with the pleasant stranger. He has developed a new conservation technique, for he is a dyed-in-the-wool trout fisherman and trout need protection.

"Anyone here know shorthand?" asked the sergeant of the recruits. Two men stepped forward.

"Good," he said, "go help with the potato peeling. They're shorthanded there!"

"Tight clothing," offers Dr. Ling Po, "does not stop the circulation. The tighter her clothing," he continues, "the more a girl circulates."

MUSTARD CATCHES WORMS

During these hot summer days when the ground is as dry as the inside of your mouth on a morning after, worms are as hard to find as a drink on a Sunday morning. If you are lucky enough to find any for sale, they are as thin as the hair on your head and cost as much as a war-steak. I figure if you're going to invite a fish into your creel, it's like inviting a girl out for dinner. The meal's gotta be good and there's got to be enough of it, or she isn't interested. That's the way it is with the fish. So, next time you plan on going fishin', just mix yourself a spoonful of mustard (powdered) with a quart of water. A milk bottle is just the thing.

Next, somewhere in your front or backyard, look for little mounds of dirt. (The best spots are under trees, if you have any). Now, when you find a mound, remove it carefully with a spoon and behold, a worm hole appears. Pour enough mustard water over the hole, to make a little puddle, then sit back and wait for results. If the worm is in, he's coming out, and I don't mean tomorrow. The first sign you get that hole is occupied will be a slight disturbance of your puddle, then it will suddenly disappear as if by magic. That's a sign that he's in, but he's coming out. All the way out, just as fast as he can pull himself out of that hole, and he isn't looking for any more mustard either. Simply wait until he is out of the hole entirely, before trying to pick him up, 'cause there's one thing he's more afraid of than mustard, and that's a fisherman.

Sometimes they're deeper than others so if he doesn't come up at the first invitation, give him another dose. There's only one excuse if he doesn't, he isn't there. Repeat this performance wherever you find a hole under a mound and it won't be long before you will have worms. Big worms, and enough of them to go fishing. You'll enjoy fishing twice as much as you used to, 'cause you'll have just as much fun getting your bait as you will using it.

"DICK" BURROWS.
Reprinted from The Federated Rhode Island
Sportsman.

NEW BASS POND AT McHENRY STOCKED WITH BABY BASS

Twelve thousand small bass have been placed in the recently completed bass pond at McHenry."

These bass are from the Bear Creek hatchery. The pond embraces eight or nine acres of water, an inlet of Deep Creek lake. Permission for the construction of the dam for the impounding of the young bass was given by the Pennsylvania Electric Company, owner of Deep Creek lake.

Construction of the dam was approved by the State Game and Inland Fish Commission. Construction expenses were borne by the fish commission, and game wardens and others provided the labor.

State Senator Gonder, who secured the bass to stock the pond, also obtained about 600 crappies from the Federal hatchery at Leestown, W. Va., which Superintendent Ralph Miller of the Bear Creek hatchery released in Deep Creek lake. The crappy is an excellent pan fish similar to bass.—

Meyersdale Republican.



MAYFLY

The Mayfly is a curious beast, He lives in the water for a year at least; Then out he crawls, and away he flies For just one day . . . and then . . . he dies!

Once out of the water he cannot eat, There isn't a thing he'd consider a treat. He hunts for a mate in the twilight dim, The term "ephemeral" was made for him. He cannot bite; he never sings As he flies to his death on fragile wings.

CARSTEN AHRENS.

FORKED-TAIL CATS

(Continued from page 17)

The catfish shown in the photograph with the net (Fig. 4) was 17 inches long or about the ordinary run taken from the main stream. However 10 to 12 pound fish are not at all unusual. Most of the big fish are taken at night, from deep holes, with heavy salt-water tackle and 3/0 hooks. Popular baits for them are, chicken entrails, flayed squirrels, or chunks of stale tough meat.

NO "FISHY" STORY

Germany once had ambitious plans for the colonization of Russia and the Baltic States, plans which included even the lowly fish. Through the Netherlands East Company and its half dozen subsidiaries 3,000,000 Dutchmen, one-third of Holland's population, were to be transported to the Baltic States and the conquered regions of the Soviet Union, where they would farm and exploit the natural resources of these fertile areas for the benefit of German and Dutch-Nazi leaders. The company organized in June 1942 was headed by Meinoud M. Rost van Tonningen, Dutch-Nazi director of the Netherlands Bank, and included among its stock holders, Air Marshal Hermann Goering.

With every German retreat in Russia the scope and prospects of the Netherlands East Company grew less inviting. Nevertheless, on January 21, 1943, the Netherlands East Company decided to organize a subsidiary, the Netherlands East Fishing Company, to exploit the resources of Lake Peipus on the Russo-Estonian border.

To induce Dutch fishermen to man the company's fifteen boats, guarantees of 300 guilders (\$162) a month were offered to married men and 200 guilders (\$108) for single men, plus room and board, a share of the profits above these guarantees and title to the equipment after two years of service.

By May of last year, the company had been able to recruit eighty fishermen who were dressed in natty Nazi uniforms and given a grand send-off by Company executives and local officials. In the words of a Hollander who recently escaped to England, "It was a real 'New Order' show. But there was one little hitch," he added. "The boats turned out to be unsuitable. And the nets were ripped on the stony bottom of Lake Peipus, so that the fish slipped through the gaps. After many futile efforts, the 'pioneers' not only did not catch enough fish for export but they failed to catch enough for their own needs. Finally confronted with starvation, the Dutch fishermen were forced to buy fish from the local populace, which somehow always managed to make heavy hauls."

Last month the Netherlands East Fishing Company omitted its usual recruiting appeal to fishermen for service on Lake Peipus. The lake was just then figuring too prominently in the Russian war communiques!

-The Fisherman.

APRIL

NOCTUIDS

Year in and year out our plant growers deplore,

The ways of this tribe with its in-laws galore.

They're all caterpillars with huge appetites; They can ruin your crops in a few sultry nights.

There isn't a plant that these villains will scorn.

They're fond of tobacco, fruit, cotton or corn. Along side of the Noctuid Family I would Swear the Jukes and the Kallikaks actually were good!

CARSTEN AHRENS.

AN EXPERIMENT WITH ARTIFICIALS

(Continued from page 19)

fect. The fins were not torn and the body was trim. In other words he was a warrior in his prime.

By now the air was chilly so after carefully packing the days catch in some dampened greens and stowing the duffel we hit the homeward trail. As we drove along in that silence characteristic of a successful trip since no alibis had to be built up, I could hear in the darkening gloaming Jack softly chuckling to himself.

"Get it off your chest," I said. "After all your health comes first."

I was just thinking that since you used practically all your worms this morning I guess you will be asking me to help you dig some soon for the next trip.'

Drawing myself up as haughtily as my tired back would allow me I am snorted, "Worms! Why I don't know what you're talking about! Anyway, who ever heard of a real fisherman using worms? After all you can't experiment with garden hackle!"

Did you hear about the mother who thrashed her little boy because he was to bring home his school report the next day and she had to go away that night?

BOARD OF FISH COMMISSIONERS HARRISBURG, PA. SUBSCRIPTION BLANK Enclosed find fifty cents (\$.50) for one year's subscription to the							
"Pennsylvania Angler." Name Street and Number	(Print Name)						
PLEASE CHECK New Renewal Do Not Send Stamps	City						



Eat Your Cake and Have It Too!

THE 1944 trout season is in progress. By necessity much of our fishing will be near our homes. There will be great concentrations of fishermen on the trout waters near centers of population. Such waters will take the proverbial beating.

The best way to insure trout fishing that will last for the season is for the inveterate angler to return the small trout he catches.

Open Frout Streams Need Willows

In idle moments along the stream plant willow shoots. This is valuable conservation work, and it is interesting to watch your trees rapidly develop from year to year.

Simply shove a cut and trimmed branch into moist ground in an open place exposed to the sun, yet in a spot where it will not be trampled.

BUY BONDS

BUY BONDS

ANGLER*



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> **Special Casts** By John Alden Knight

Vacation: Price, \$6.50 By Dick Fortney

Plug Shy Bass By J. Glenn Hollowood

Tips For The Angler By Dick Fortney and Philip M. C. Armstrong

A Trout Stream Prescription By Charles K. Fox

The Shad Are Running By D. Herbert Syfrit

The Trout Fisherman's Field Book

By Ed Leonard

Due to conditions beyond the control of the Fish Commission it has been impossible to maintain a regular publication schedule of the Pennsylvania Angler.

Outdoor Writers Association of America Discuss Conservation of Tomorrow

The importance of soil as the basic natural resource and the interrelationship of all living things were stressed during a forum on "Education, the answer to Post-War Conservation", held as part of the conservation congress of the Outdoor Writers Association of America at Columbus, Ohio, Feb. 21-23. The writers were urged to present this broader concept of conservation to their readers as an obligation of their profession. E. Sydney Stephens, chairman of the Missouri Conservation Commission, served as moderator for the forum.

Nash Buckingham, sportsman-author of Memphis, Tenn., opened the discussion with a definition of sportsmanship as the concept which permits enjoyment of the out-of-doors in the knowledge that natural values are being conserved and improved. This kind of sportsmanship, he made clear, places enjoyment of field and stream on a plane above creel limits and full bags.

The work of the relatively new conservation society, "Friends of the Land" was explained by Dr. Jonathan Forman, Columbus physician and one of the founders of the movement. Through the medium of mass meetings and the attraction of big-name speakers the organizaion is carrying the doctrine of the soil to city populations generally missed by the efforts of other conservation agencies. Education of urban populations as to their utter dependence on the land is essential to conservation and, in fact, to the maintenance of civilization in a democratic society, the "Friends" maintain.

Louis Bromfield, noted author, conservationist and lecturer for Friends of the Land, made an unscheduled appearance on the forum program at the particular request of Mr. Stephens. The moderator asked Bromfield to tell what had been the reaction of wildlife to soil improvement measures on the famed Malabar farms in Ohio.

"When we moved to the run-down land, wildlife was extremely scarce," Bromfield related. "Pheasants and other game released on the farm did not stay, but moved down into the valley where the soil was more fertile and apparently more to their liking.

"After several years of building up the soil, however, pheasants and other wildlife became so abundant there was no need for restocking. nuisance and we had to invite hunter friends to help thin them out.

"I am sure that wildlife including furbearers also has increased on one virgin tract of wilderness on the farm, which was set aside as a game sanctuary. This increase came about, we believe, because surrounding lands now are providing more cover, more feed and more palatable or nutritious feed than before."

Dr. John S. Cunningham, Ohio State University, told what schools, colleges and universities are doing to integrate conservation in the curricula.

"Within very recent years," he said, "our leading universities have established programs that gather together the biological sciences, the sciences that relate to soils and their proper management, productive agriculture and forestry, together with painstaking studies of wildlife, both plant and animal."

Dr. Cunningham mentioned the work of 4-H clubs and other youth groups, and emphasized the strategic position occupied by the Agricultural Extension Service in any conservation program. The soil conservation district, now authorized by the laws of most 'states, he described as another factor likely to help in general conservation.

"While educational institutions can lay certain definite foundations," Dr. Cunningham said in conclusion, "what they do principally is to provide a fairly intelligent audience for you gentlemen of the fourth estate. You are the front line whose duty it is to deliver the continuous barrage. Without the help of the press-the free-speaking press of America-no effective conservation program will ever succeed. With a sound horse-sense program devised by our scientists, and supported by an aggressive and levelheaded press, we will be able to make the public conservation-minded.'

The pioneer work of the Ohio Conservation Department in teacher training was described by Ollie Fink of the Ohio Department of Education, whose staff position is maintained by the Conservation Department. Fink is director of an annual conservation laboratory for teachers at Leesville Lake in the Muskingum Conservancy District.

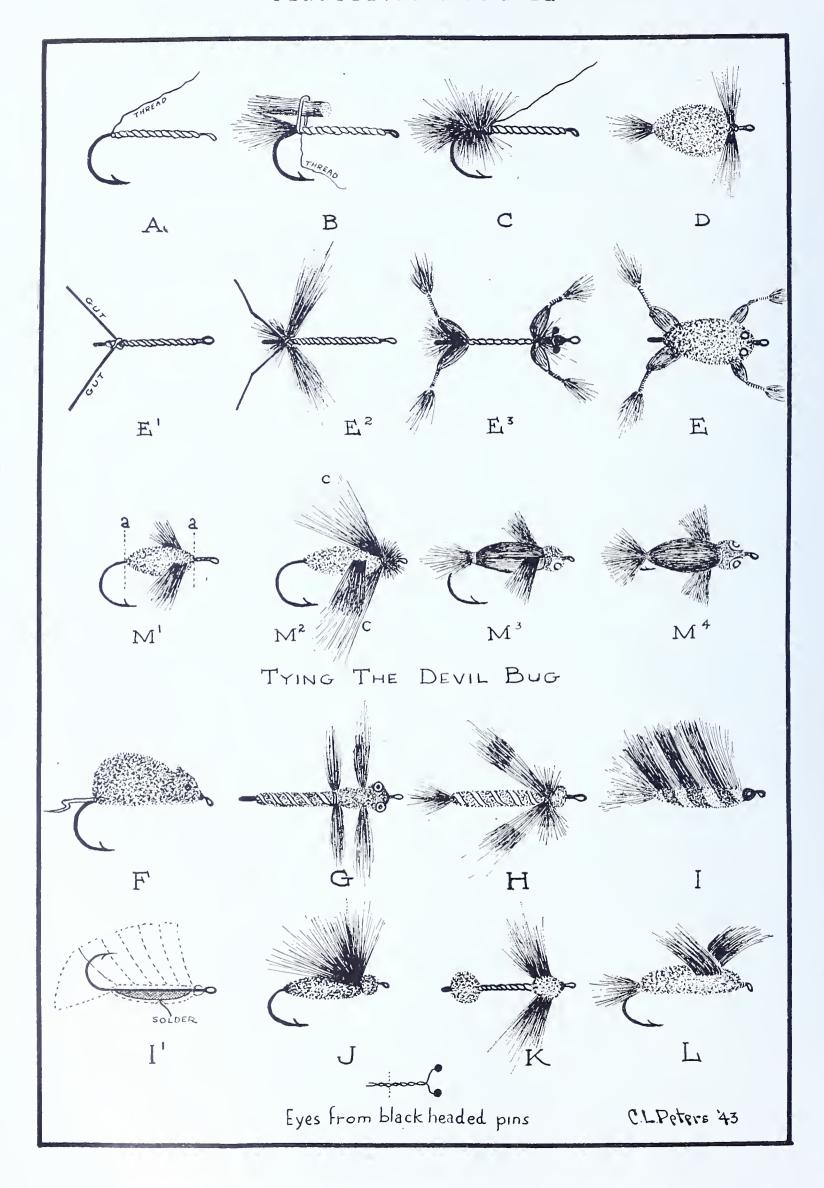
"The bottleneck holding back conservation education in the public schools is the lack of conservation-trained teachers," Fink declared. "A teacher docs not learn to swim by reading a book, and neither does a teacher become an enthusiastic conscrvation teacher by reading a book and by staying indoors.

"Conservation is an outdoor program. Education is that preparation which helps man to understand his environment and to continue to live there happily and usefully. Conservation education prepares a man and makes him want to understand his environment and to live there happily and usefully."

The forum was closed by Albert M. Day, assistant director of the U. S. Fish and

Wildlife Service:

"Education must be coupled with action by state and federal conservation agencies," he said, "and by an informed group of writers who will dispense sound conservation news."





DURING the past several months we have received so many requests for information on the methods employed in the tying of deer hair bass bugs that after answering a bulk of correspondence on the subject we feel that an article dealing with the material used and the various methods employed should be of special interest to the readers of the ANGLER.

Imitations tied of deer hair are among the most successful lures for bass and, incidentally, we are using a small trout bug of our own design with very gratifying results.

From questions we have been called upon to answer it appears that some tyers have trouble fashioning these deer hair lures due to the fact that the hair just does not seem cooperative enough to stand in the proper position.

In order to simplify the procedure as much as possible, let us try a simple winged bug. First place in your vise a rather large hook, say a number 3 or 4 with a fairly wide gap. This will permit plenty of room to operate on your first attempt. With a heavy type of thread of the "Aunt Lydias" type, or better still linen thread which is stronger and need not be so coarse, start at the eye in the same manner as in tying a dry fly. Wrapping over it's own end roughly cover the shank of the hook to form a base for the hair as shown at A. Now select a bunch of deer hair from a tail and after applying a thorough coating of liquid laquer or cement, hold the deer tail hair parallel to and on top of the hook and bind it firmly into place. By extending this tail hair along the hook to within a quarter of an inch of the eye an even base for the body hair will result. On the workmanship of this foundation will depend your ability to hold the body hair from turning and slipping. One fly tyer tells us that he solders a pin along the shank of the hook to form an oval shape rather than round in order to prevent the body from turning. If one is careful to form a solidly cemented base this additional work will not be necessary.

After the tail has been tied in select a piece of deer skin preferably from the nape of the neck or the base of the tail, as this hair is coarse and will work better for a start. Later as your work takes shape more easily you will want to use finer hair from other parts of the hide as this finer hair will produce nicer and more compact bodies.

With the thumb and forefinger of the left hand grasp a bunch of hair as large as you can hold conveniently and cut it off close

to the hide. Shake out the loose ends and fine pieces and hold it over and parallel to the hook shank as shown at B. Now take two loose turns of the tying thread over the hair slightly in front of the center line and pull firmly downward with the thread, and at the same time hold and guide the hair with the left thumb and forefinger to keep it from turning. Work the thread through the hair toward the front and with the left hand draw the hair back out of the way while taking two or three wraps of thread tightly in front. Some tyers hold the thread at this point by the weight of the hackle pliers. I prefer to use a half hitch.

At this point most tyers lose patience because they expect the hair to stand neatly at right angles with the hook. This, however, need not be true and if it appears something like that shown in figure C you need not be discouraged because the next wad of hair will force and hold it in position.

Repeat the above procedure until you have reached a point where the wings are to be attached. This will be about one quarter of an inch from the eye of the hook. The wings may be tied from various kinds of hair or from hackles as shown at D, and the bindings later cemented and enameled if you choose.

The next step is to trim the body to the desired shape. We find that the easiest way to obtain a shapely form is to trim the entire body roughly and then proceed to shape it up to get a uniform well balanced bug. Here is a tip that will help considerably. A cheap toothbrush is ideal for brushing off the fine clippings as you proceed with the shearing process.

Referring to the finishing of the head, there are so many ways of finishing them that you will likely develop your own pet method after you once acquire the knack of tying and trimming the bodies. Here are a few ideas with which you may toy and develop to your own particular taste. The bindings over the wings may simply be laquered and the head be finished with a few turns of the whip finish. A few turns of chenille in front of the wings makes a very good appearance and do not impair the quality of the bug. If the wings are set back further and additional deer hair tied in front of them it may be trimmed to form a neat looking head. Eyes can be added to fine compactly tied heads by applying a spot of laquer or finger nail polish. After this is dry, color may be added by adding a spot of yellow or white and then a spot of black

in the center. Either combination is found to be effective. Black beady eyes for deer hair mice and some types of bugs can be made in the following manner. Secure some black headed pins and with a match heat the pin to remove the temper. With small pliers twist the pins together to assume the shape shown in the drawing. A part of the pin may then be removed, as the entire length will not be necessary. Very small glass eyes may be purchased from taxidermist supply houses.

It seems to appear from some o. he correspondence we have received that there is more or less mysticism concerning the methods of tying lures of deer hair. That, however, is not true and, moreover, they are emphatically not difficult to tie. The only secret lies within the student himself, and by that we mean the secret depends entirely upon your desire to learn and a bit of perseverance. Don't despair if your first bug is a total failure. Mine was. Even though you should fail in your first attempt, do as I did. Cut it from the hook and try again. After acquiring the knack you will find that it is all quite simple.

After you have mastered the tying of the simpler type of bug, you will doubtlessly want to make frogs, dragonflies, shrimp and all sorts of doo-dads, that sound or unsound reasoning tantalizes the mind with the idea that it will appeal to the bass even though it appears like something out of this world. We have tried some of these monstrosities, and even the thought of offering them to any self respecting bass seemed an insult to the instictive cageyness with which mother nature endowed them. Some bass, however did show more than passing interest in them, and the pickerel in Sherman's creek, Perry County, accepted them with sheer delight. Fish are always unpredictable and the element of surprise is the essence of days

In tying the frog the eyes and leg supports may be bound into place firmly and cemented to the shank of the hook before any hair is added. Charles Wetzel, whose prowess as a first class fly tyer is not to be disputed, uses wire leg supports. We fashion ours from heavy synthetic gut. We find that the gut allows more action and that, after all, is very desirable. You may try both mediums and then choose the one to your liking. If you choose the heavy gut, bind a piece three inches long crosswise over the hook as shown at E¹. Cement the cross (Continued on page 18)

FLY CASTING-THE EASY WAY

By JOHN ALDEN KNIGHT

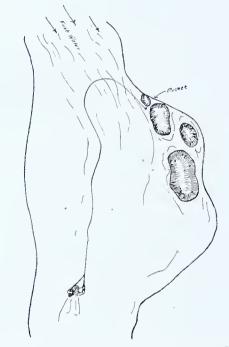
Article Number 4 (Conclusion)

SPECIAL CASTS

In the previous installment of "Fly Casting—The Easy Way," you may recall that the subject of curve casts was under discussion. Having learned the simplest methods to throw both the positive and negative curves, let's take a quick look at some of the uses of this handy fly-rod maneuver.

In a rocky stream, the curve casts are valuable assets. Brown trout, as a rule, lie in the little areas of quiet water directly upstream from boulders that divide the current. To reach most of these places, positive or negative curve casts serve the purpose. Once in a while, however, a wider positive curve is needed than can be thrown by the usual methods. For instance, suppose that you wish to drop your fly into a deep pocket between two boulders-deep enough to require a positive curve of ten feet or so. The way to do it is to aim the cast so that the line will strike the boulder nearest you just before the fly snaps around into the positive curve. You will find that line, leader and fly will whip around into the pocket as far as you want them to go. This same method can be used when casting around the base of a stone pier of a bridge.

Many times in a day's fishing you will find that a fish has taken his feeding position on the far side of a fast current. To cast across this swift water without first



Use of Negative Curve to Fish a Pocket Guarded by a Swift Current

Plate No. 1

making some provision to avoid drag is to risk "putting the fish down" with a fly that drags on the first cast. The use of the curve cast is an excellent way to avoid such a catastrophy. Plate No. 1 shows the use of the forehand negative curve cast in this regard. The negative curve was used because a more extreme curve can be thrown with it than with the positive curve. These, of course, are only isolated instances wherein the curve casts come in handy. Once you have mastered them, you will find that they are of invaluable help in solving your stream problems.

A good "all-round" caster can make his line and his fly do pretty much what he wants them to do. There are, however, some special casts that will enable a good natural caster to handle his outfit more easily than would be possible should he not be familiar with these casts.

The Roll Cast

The roll cast, as it was first developed, was distinctly a wet-fly cast, its purpose being to enable an angler to lay out a reasonably long line from a position that allows him little or no room for a regular back cast. Since its development, the user of the roll cast have been widened considerably in scope and it lends itself in several ways to dry-fly fishing. In addition, its principle has been incorporated into certain special casts, such as the Spey cast, for example.

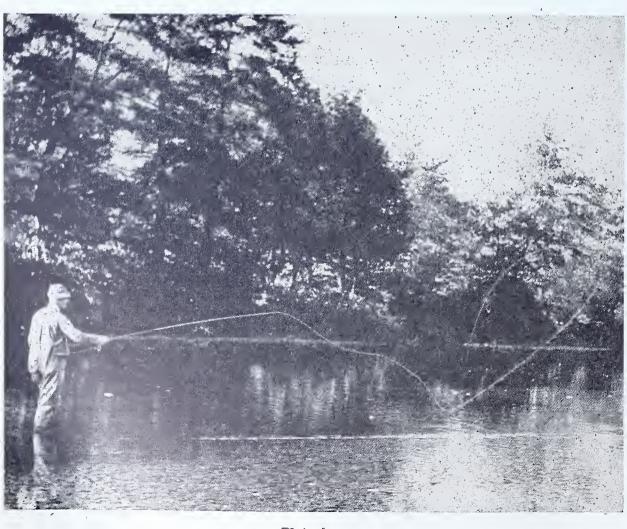




Plate 4.

Plate 3.

The first position of the roll cast is to raise the rod tip so that the rod is held erect, almost in the "one o'clock" position to the rear, with the line hanging down loosely from the tip. (See Plate No. 2.) To make the cast, slash the rod down decisively, at the same time throwing the tip away from you in the direction you wish the cast to go. The line will pick itself up from the water in a rolling loop and extend itself full length on the water in front of you. Plates No. 3, 4, and 5 show the successive stages of the simple roll cast. The size of the loop can be regulated by the amount of "throwing in" of the rod tip at the completion of the cast. If the power of the cast is transmitted mainly by the rod tip, a small loop will result. If you wish to throw a large loop-a necessity in long casts-apply the power to the cast with the middle rod only, allowing the tip merely to follow through with the line, but lending no power. A well-greased line is a great help in making a roll cast come off properly.

The Roll Pick-up

Not infrequently, when dry-fly fishing, the line will drift back until too much slack has accumulated to permit the ordinary pick-up to be used. The hard way to regain control of the line is to strip in slack through the guides until the ordinary pick-up can be made. Then the extra slack can be worked out again by means of the "double shoot" while false casting. A simpler method for regaining control of the extra slack is to bring the rod erect and then snap it forward and down, just as though a simple roll cast were being made. As the loop rolls forward, but before the cast has completed itself and while the fly is still in the air, pick up the line and the



The start of the roll cast, Plate No. 2.

fly with the ordinary pick-up, and false cast until ready to recast the fly to a desired spot.

The Switch Pick-up

A good pick-up to use in quiet water to avoid excess disturbance of the surface is the switch pick-up. This pick-up has a dual advantage over the roll pick-up. Not only does it create less disturbance, but it precludes waiting until the line has drifted close enough to permit the upright position of the rod that is necessary for the roll pick-up.

This cast is a variation of the roll cast, and it embodies the same technique with the rod. To execute the switch pick-up, the caster should reach out with his casting hand in the direction from which the line is drifting, the rod held parallel to the water, so that the slack line hangs straight

down from the tip. Turn the casting hand until the palm is facing upward, and place the thumb against the rod grip directly opposite the palm-in other words, place the side of the thumb against the top of the grip as the rod is held. Now, snap the upper rod smartly to the left (assuming that you are right-handed) and slightly upward, so that the arc of the rod's motion lies in a plane that is tilted ten or fifteen degrees above the horizontal. The snap of the rod to the left is exactly the same motion as that used in the simple roll cast. If done correctly, the line will twist and spiral itself up from the water, lifting itself completely into the air. Just as the fly leaves the water, pick up the line in the regular, conventional pick-up, and false cast to regain the proper timing and to dry the line and the fly. You will see that this pick-up makes almost no disturbance on the surface and it is a great time saver in a slowmoving pool.

A Handy Adaptation of the Roll Cast

There is another variety of the roll cast which has no name that I know of, but which is quite handy under certain conditions. Suppose that you have just stepped into a trout stream. Your tackle is dry, with the line still spooled on the reel and the fly freshly oiled. There is a trout feeding near the far bank, directly opposite you, but the water is too deep to permit much wading and you are forced to take your position with your back just clear of the overhanging bushes on the bank. The problem is this-how will you get your freshlyoiled fly over to that trout, at least fifty feet away, so that the fly will stay dry and float high, "on its toes"? To use the conventional roll cast means several successive

(Continued on page 16)





l Cast in Progress

Plate 5.

VACATION: PRICE, \$6.50

Here's How Four Friends Spent a Week Under Canvass In Spite of Gasoline and Food Rationing

By DICK FORTNEY

THE sky was filled with black clouds, and thunder was rumbling heavily. Brilliant stabs of lightning licked up from behind a low hill half a mile away—and Brooks and I decided it was time to pack up the fishing tackle and head back to camp.

Great drops of rain were spattering down before we got very far, and we made the last half of the trip at a dead run. The full fury of a mid-July thunder and wind storm broke as we skidded to a halt in front of our tent.

Bill and Bucky already had hustled into the tent next door, and they had the flaps lashed down and a gasoline lantern lighted.

It was dark as night, although only about 6 o'clock in the evening. The rain thundered on the canvas over our heads.

Then the wind began to blow.

Above the sound of the storm we heard a crashing of wood, and Brooks exclaimed:

"There goes our dining-room."

I was too busy to answer. I had all my weight braced against the slender pole in the middle of our tent, and the force of the wind was enough almost to throw me off balance. The tent heaved and strained and swayed, but the steel stakes to which we had anchored it held, and the storm finally blew itself out.

Peering through the flaps of our tents, we saw what a lot of destruction an electrical storm can do in a few minutes.

The fly we had spread over our cooking and eating equipment lay over them like a wet blanket. Loose bits of camp furnishings were scattered about. Rain had driven into the car through a window that had been carelessly left open.

But our camp was high and dry. The rain had drained off almost as quickly as it fell, and order soon was restored.

"This," remarked Bucky, as the clouds parted and the red glow of sunset shone on

the camp, "is the beginning of what I have a hunch is going to be a very large and interesting week."

The storm, however, is getting a little bit ahead of the story—the story of four fellows who solved the problems of rationed food and gasoline and who had a swell vacation for a week—camping, loafing, eating, and fishing—at a cost of \$6.50 each.

It wasn't a question of time, in the beginning, for any one of the four of us—Bill, Bucky, Brooks, and this observer. Bucky and Brooks could leave their garage jobs, and Bill and I had our regular vacations from the newspapers where we are employed.

Gasoline and food were our main worries. We solved the gasoline problem by getting a vacation driving permit and drawing straws to see who would use his coupons. I drew the short straw. Bill eased the situation by providing a trailer on which we could haul our camping paraphernalia.

We solved the food rationing problems simply too—by making up a list of provender that would eliminate all rationed foods and by gambling on our ability to catch enough meat to round out our diet during the five days we planned in camp.

days we planned in camp.

We didn't take butter. Home-made jelly and preserves were substituted. We begged from our wives enough cooking oils for the week. We rounded up a quantity of fresh vegetables, and of course there was no trouble in getting all the bread and pancake flour and such provisions as we felt we would need.

We borrowed from a friend two mediumsized tents and two cots for each tent; a large square of canvas was packed for the cooking tent. And we piled the trailer high with all the other odds and ends necessary for a vacation in the outdoors.

The spot we selected as our camp site

was along the shore of a little creek in a clump of young black walnut trees, at the edge of a fairly deep pool that would serve both for swimming and fishing. A quarter mile away was the home of our host, who during the week was a never-failing source of fresh milk and eggs and drinking water.

MAY

Storms ride in from the north in this particular locality, so we placed our tents side by side facing to the west, and that's the reason the wind didn't scatter them over the corn fields during that storm the first night we were in camp.

Beyond the tents we put up our cooking fly, covering a picnic table that provided us plenty of room for our gasoline stove, for storage of our food, and for eating. A good distance beyond the camp we dug a latrine.

We put our tents on gravely ground that provided good drainage. From directly in front of the tents to the creek the ground sloped gently downward. The walnut trees provided shade during the middle of the day, yet permitted the early morning and the afternoon sunshine to bathe our camp and keep things dry and fresh.

We never regretted our decision to pitch our tents on the shores of the creek.

After the storm that first night Bucky noticed that the stream was slightly off color. He searched around for a dozen night-crawlers and soon had a baited hook in the pool.

Bill and I joined him, and in less than an hour we had a fine mess of catfish. We kept them in a bucket of fresh water all night, and in the morning it fell my lot to skin and clean them. Those catfish, with pancakes on the side, made the finest breakfast a man ever ate.

Our camp site was ideal—except for one thing. It lay directly beside a path which we didn't realize at first had been worn in the sod by our farmer friend's cows en





Dick, Brooks, Bill and Bucky, pitch their tents under the walnut trees.



We were at breakfast the first morning when the cows introduced themselves.

rcute from the barn yard to a pasture a bit beyond us up the creek.

We were at breakfast the first morning when the cows introduced themselves. One old bossy-you could tell by the contented look on her face that she meant no harmpoked her dumb face into one open end of the cook fly and snorted gently.

Brooks, sitting in range of the beast, almost jumped out of his skin. His yell of amazement startled the cow, and that gentle

soul turned quickly, ripped loose a tent rope with one leg, and lumbered away.

She joined the rest of the herd around us. A couple other cows were peering inside each of our tents. One was sniffing the waterbag which hung from a low branch of a nearby tree. Another was licking the metal radiator ornament on my car. The metal radiator ornament on my car. rest were lined up giving us a thorough inspection.

Bill saved the day. He began yiping like

a very angry dog-and the cows swung into line and hustled up the creek.

We were ready for them every morning after that. Bill just did his barking stuntand the cows gave us a wide berth.

Bucky was unanimously elected cook the first day. Since we had brought no meat, of course we set our minds on meat for dinner. An hour of fishing gave us all the bass and panfish we could eat, and Bucky (Continued on page 14)





Between intervals of fishing we have shore dinners.

PLUG SHY BASS

By J. GLENN HOLLOWOOD

WELL, I know that I am going to start an argument, but what difference will one more make. Please let me state here that bass do become plug shy. What I say here is my own experience, and it does not come from any boat-house or sporting goods store argument.

If you will observe upon the opening of Bass season on our inland waters, the take on plugs will be-I might say-good for the first two or three days, then it will drop off very fast and the plug fisherman will ask, "What is wrong with the bass; they're not hitting?" Well, brother, I can tell you, they are plug shy. Now, just put yourself in the place of the bass, if you will allow me to use this as a comparison. Suppose that starting upon the first of July 1944 every time you ventured outdoors, a plane would fly over your head and drop a bag of water. How long would you stand for that before running to cover? Now, understand I do not wish to criticize the plug fisherman; in fact, I enjoy watching a good plug caster. Furthermore he has an advantage over my fly rod when it comes to night fishing.

Now to the business of trying to prove my theory. In the second week of July two of my fishermen friends persuaded me to go to Gordon Lake with them for a day's fishing. They informed me that it would be advisable to take a casting rod, as the water was too deep to do any wading and you could not get a boat. I did not like the idea of traveling 90 miles to fish with a casting rod, But I cannot resist the temptation of a fishing trip. My friends issue very short notice. They expected to leave in an hour.

Now, I don't have to tell a fisherman just what was going through my mind as I walked home. What will Mrs. J. G. have to say? I decided upon an approach something like this. "Hi Mom, do you have anything planned for tomorrow?" Then I will get one of those long fixed stares. "No, but you do", she will add. "We'll get it, (meaning the ice packer) how many sandwiches shall I put in? Now there go all of the ice cubes for the iced tea at dinner." And that is just about what transpired before I left.

Well, we arrived at the lake about 3:00 A.M. to find we had lots of company. After a cup of hot coffee and a sandwich, we rigged up ready to give the bass the works, and we did. We plugged from dawn till 10:45 A.M. without a strike. I know when I am licked so I went back to the car, got my fly rod, and returned to the same place I had been plugging.

Upon my return, I met a fisherman from Pittsburgh who also had become discouraged. We talked for five or ten minutes, then he went up the lake. I decided the bass had enough rest, so I went to work. On the fourth cast, the lake turned inside out. Mister, what a strike! I set the hook and the fight was on. Well, I don't know how many fishermen were on that lake, but in about two minutes I had quite an audience, all offering advice. But, understand you don't just hoss a 3 lb. 11 oz. bass out with a 4½ oz. fly rod and a 6 lb. test leader.

After playing my fish for some time, I brought him to net.

In a short time after I hooked and landed 2 more nice bass, not as large as the first, but nice fish. My Pittsburgh friend came down and asked, "What in the Hell are you using?" In reply I handed him one of my lures. "How much is it," he asked. "That is yours, for luck".

I did not see him again until some time later when I met him at Bridgeport dam. He had been there since morning, plugged all day, and not a fish to show for it. His first remark upon seeing me was "Mister, am I glad to see you. I want 2 or 3 Whiz Bangs, I lost the one you gave me." Not being able to accommodate him with the number requested, I gave him one that I had been using. He got his fly rod set up and we set out for the evening fishing together. By dark we had seven bass between us which I consider a nice evening's fishing.

Another occasion, may illustrate theory. I went out for an evening's fishing on a body of water not far from my home. Upon arriving at the dam, I noticed that the bass were working, and that only a few bait fishermen were there. What a nice set-up for a good fight with the bass. It proved just that. I walked around the dam to the first cove before starting to fish. It didn't take long to get action. I hooked and netted one and returned two fish which were legal. Three plug casters then walked in on me and they gave a real demonstration of plug bombing. The fish stopped hitting, so I moved to the next cove where I got more action, but not for very long. My friends moved in on me once more, so I moved back to the first cove, and I sat down for a rest and a smoke before going to work. Shortly thereafter I hooked and netted another. They caught nothing. That was proof enough for me.

I might relate another incident which happened upon a lake in Ohio on June 19. My presence there at that time is due to the fact that the bass season in Ohio opens on the 16th of June. I started to fish at day break, wading the shore line about 20 ft. out from the cat-tails and casting in and ahead of me. It didn't take me long to catch my limit of nice bass. Looking at my watch I saw that it was only 6:15, too early for breakfast, so I decided to fish back as far as the cottage and give Mrs. J. G. a little more time. On my return several nice bass were caught and returned to the water. As I drew near to one of the three boats anchored out from shore, I was addressed in this manner, "Pop, what is the idea? We have been watching you catch fish and returning them." For an explanation I held up my fish bag. "Hell, Bill, will you look at that, and we have not had a strike. How do you do it?"

I said, "that's not a secret. Do you have any miniature plugs and a light line? If so, change and I think that will do the trick. The bass have had a heavy bombardment of large plugs in the last three days and they are plug shy. If you will allow me to sug-

gest that you pole your boat about 50 or 60 ft. from the cat-tails, and cast toward the edge, I think you will get results."

About 10:30 my fishermen friends stopped at our cottage to show me a nice catch of bass.

BASS DO BECOME PLUG SHY

I do not find any difference between bass in the States and in Canada. On the 17th of last July, Mrs. J. G. and I made a trip to Canada. No, we did not drive. We got a plane from Pittsburgh to Buffalo, N. Y. where we joined my brother Robert D., Robert Jr., and Mrs. Robert Jr. From there on we traveled by rail to Kaladar, where we were picked up and driven twenty-two miles back in the timber to Mississagagaon Lake and Salmond Resort. Upon arriving there quite late in the afternoon we were informed that the bass were not biting. We received this information from a number of fishermen who had just come off the lake. They were mostly pluggers, a few bait fishermen, but not a fly rod fisherman in the crowd. After getting settled in our cottage, R. D. and I decided to give it a try. He insisted that he handle the boat and I was to do the fishing. We headed for an island about 1/4 mile away which looked good to me. This island has a shore line about two miles long with trees hanging out over the water. It appeared to be an ideal place for bass to feed and it proved to be just that. After making a cast or two I dropped my bug in a most likely place, it was permitted to lie there for about ten seconds, then by lifting my rod tip the bug was given a lifelike movement. That did it! There was a splash and I set the hook and for the next five minutes it was a game of give and take. The first thing that that bass did was start for China, down, down, and down in about 40 feet of water. That is where he stayed until I tapped the end of my rod with my knife and jarred him loose. Up he came and did a nice dance on the surface. Look out! Under the boat he goes! I managed to swing my line around the stern of the boat just in time. That bass knew every trick in the book. Four and one-half pounds of smallmouth bass. What a beauty! From that time till dusk I caught nine, and three were returned uninjured, as six is the legal limit in Canada.

These and other experiences convince me that heavy plugs make bass plug shy. This of course is theory, but I am sold on it.

DICK FORTNEY writes:

In fishing with a cast of two wet flies attached to one leader, it is wise to have the lures at least three feet apart. Thus a greater range of water is covered.

In section of the country where rainbow trout are not native but are being stocked, anglers must remember that this species is addicted to life in fast water. The rainbow lives and feeds there. Even in small streams, it prefers the riffles, although they may be shallow.

TIPS FOR THE ANGLER

DICK FORTNEY writes:

Most beginners at dry fly fishing—and not a few old-timers—get the idea that the proper method is to cast upstream and let the fly drift back down. As a matter of fact, a far more easy and productive method is to fish across stream. To illustrate, stand at a position that would correspond with the figure 9 on the dial of a watch. Then cast the fly to a point that would correspond with the figure 1 and let it drift as far down toward the figure 6 as it will go without drag. You will find that this system gives you better control of the floating line, leader, and fly and makes possible greater accuracy in placing the fly.

Don't be a one-lure or one-bait angler. Acquire skill at all kinds of fishing. Besides enjoying the sport of using new lures or methods, you also will thus prepare yourself to meet any fishing conditions which you may encounter.

Angling in a pool where fish have just been stocked usually is a waste of time. The old-timers fish the stream above the stocking point, often as far as a mile away. Newly stocked fish invariably move upstream as quickly as they have recovered from the shock of their change of environment.

Nice fish often can be taken on bits of natural bait found under the rocks of shallow riffles on bass or trout streams. The fish are well acquainted with these morsels and strike them readily.

Here's evidence that big fish want big bait or lures. An attendant at a state trout hatchery in Pennsylvania killed a large water snake and tossed it into a pond where breeding trout were kept. One big trout grabbed the snake by the middle, and two other lunkers grasped the head and tail. The snake never was seen again.

One twitch of the wrist will set a fly firmly in the mouth of a fish, one good yank on a throw line will hook a biter in still-fishing, but one strike is not always enough to securely hook a fish that has been caught on a casting lure. A second strike, just to make sure the hooks are driven home, is advisable. But not too hard!

Rainbow trout are probably the most free feeding members of the trout family. A fly and spinner are deadly. Even casting rod lures can be used effectively, and that means that the minnow type of underwater plugs should be tried as well as the spoon type.

In fast water brook trout seek resting and feeding stations behind rocks, logs, and other obstructions which break the current and from which they can keep watch for food that the stream carries within their reach. With this fact in mind, the angler is wise to cast his bait or lures into fast water and let the current carry them to the fish.

Wet flies are as effective in quiet water as in riffles and fast runs if they are used properly. Short, not too severe twitches of the rod on the retrieve—enough to move the flies three or four inches at a time—will turn the trick.

Minnows are a favorite food of rainbow trout. That is a good tip for the bait angler. The fly fisherman will want to use streamers that are made in imitation of minnows.

Light leaders are as proper in bait fishing for trout as in using wet or dry flies. Experts recommend 2X for clear, slow water, and 3X for very low water. A hook as small as Size 14 often can be used to advantage with bait.

Feeding brook trout have a habit of exploring small pools and deep shoreline pockets in search of food. Those are the spots in which to drop worms in the early weeks of the fishing season.

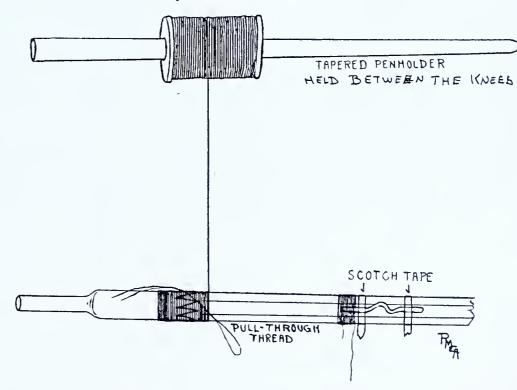
Spinners and live minnows are good bait in large streams for the larger trout, or a streamer fly and spinner may be used for the same purpose.

Don't be discouraged if trout refuse wet flies when you begin angling. Two things can be done. First, vary the depth at which the fly is fished until you locate the level at which the fish are feeding. Second, vary the speed of the retrieve until you get just the right action.

As streams clear and fall in late spring, a nine-foot leader and a light line are required implements of the worm fisherman. Upstream casts, with the line handled so as to permit the bait to float freely and naturally with the stream current, also is good strategy.

EMERGENCY ROD WINDING

By PHILIP M. C. ARMSTRONG



In putting a new winding on a rod joint it is much easier to do a neat job if one has a device to keep tension on the thread. Various contraptions for this purpose can be bought, but the average amateur does not have enough use for it to pay to buy one.

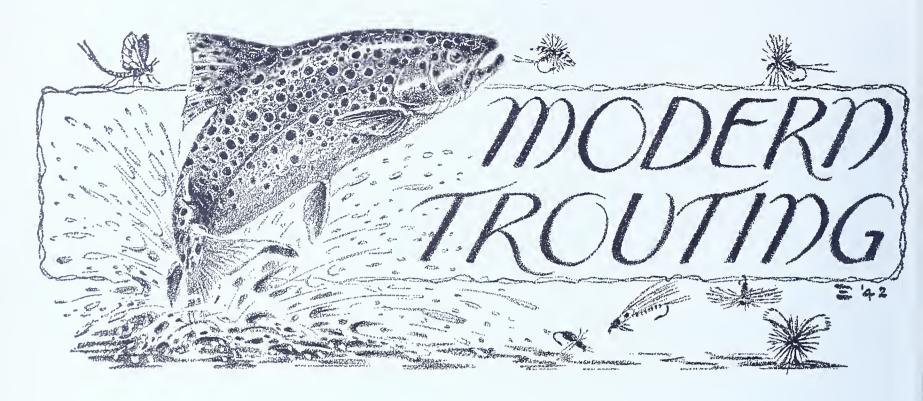
A simple improvisation, which answers the purpose for occasional jobs or emergency use in camp, consists merely of a tapered shaft which is jammed in the hole of the spool. One of the moulded plastic penholders sold in the 5c and 10c stores for a nickel is just the right size and shape. Or one may be whittled from a stick in a few seconds.

By placing the assembly horizontally between the two knees sufficient pressure can be applied to the ends by the knees so that a stiff pull is required to rotate it. The degree of the tension is readily adjusted by varying the pressure of the knees.

Winding on guides is much facilitated by first binding them in place with narrow strips of the sticky transparent material called "Scotch Tape." When the winding covers enough of the guide base to hold it the tape is removed and the winding completed

As "Scotch Tape" has amazing strength and sticks very tightly, in an emergency guides may be held securely in place with strips of it wound several times around the stick, and the rod used for some time, if necessary. It may also be used for binding a weak spot where the stick has come unglued, or even for securing a temporary splice in a fractured joint.

"Scotch Tape" is useful as a pinch hitter in so many ways on a trip that no angler's kit should be without a 10c reel of it. A 5c spool if Size A silk thread is another cheap bit of insurance. Add a 10c bottle of colorless liquid nail polish for varnishing rod windings (keep it off the varnished wood), and line splices and you are all set to do almost a finished job in camp. A touch of rod varnish when you get home is all that is needed to make it permanent.



A TROUT STREAM PRESCRIPTION By CHARLES K. FOX

WARDEN George James looked at the stream and said, "there are not enough rocks in this section." This was another way of stating that the carrying capacity of this water is low.

That was five years ago, but today this same water is different, thanks to stream improvement work carried on by a few of the inveterate. Forty truck loads of stone and broken concrete have gone into the 150 yard stretch; logs and brush have been anchored, and willows, silky dogwood and black alders have been planted. The results are, the carrying capacity of the stream has been increased and the water has become more interesting to the angler.

The stream in question is a large one, but in spite of this the work was not difficult and it did not require a long time to bring about considerable improvement.

Recognizing the fact that improvement work entails making a home and cover for nymphs and other aquatic life as well as for trout the following experiment was conducted. Three very different types of material were available. We had: pieces of quarried limestone with at least one flat side, round rocks from the York County glacial area, and pieces of concrete taken from torn out pavements. All three were approximately equal in bulk, but of different shapes. All were of a size referred to as "one man rocks", that is, not too large for one man to handle, but each a two-handed proposition for one man.

In various spots in the stream three such different pieces were placed side by side and in other spots clusters of individual pieces were placed together. After they had been there for sufficient time to attract and collect aquatic life a biological survey was conducted. Although the survey was crude it was conclusive.

We raised the pieces separately to see what had collected under them and among them. The round smooth surfaces of the boulders supported very little life. The flat sides of the limestone were more effective. The rough sides of the concrete chunks reigned supreme. The number of may-fly and stone fly nymphs which congregated in the crevices and holes of the jagged side of the concrete was astounding.

We catalogued the effectiveness of the three materials as follows: For every nymph clinging to the small boulders there were three using the limestone and twelve using the concrete. Immediately upon this revelation provision was made to secure all the pieces from old pavements removed from the sidewalks of New Cumberland.

. Some small dams and wing-walls were constructed. At first the concrete had an artificial appearance, however, it was shortly covered with valuable algae (food of certain aquatic life) which changed the whole aspect.

After a dam or wing-wall had been in place for sometime, quantities of gravel lodged in front of it practically burying the bottom stones or pieces of concrete.

The most satisfactory method of handling our combination of materials was to place a piece of concrete on the gravel bottom with the jagged side upwards. Upon this was placed another piece of concrete with the rough surface downwards. Thus the two irregular surfaces were together and above the gravel. A piece of limestone was placed upon these and this provided the necessary weight to hold the other pieces in place. It worked very well to place another slab of concrete slanting in front of these pieces with the jagged side facing down stream.

This combination of material and this arrangement was most satisfactory for: wing walls, small dams and isolated clusters.

It was apparent that the carrying capacity for aquatic life depended upon the surface areas of the materials involved. The rough jagged underside of the concrete gave this particular material a greater surface area than that of the stones.

The great effectiveness of the concrete with the one rough surface naturally suggested the possibility of special blocks or slabs with two large rough surfaces. A practical piece might be one triangular in shape and about two feet on each side and about four inches in depth. Such pieces could be handled readily and could be fit together nicely. They could easily be made from crushed rock, and the rougher the sides the better. To date we have not had the opportunity to experiment along this line.

It is a simple matter to bring about broken water and deeper water in a flat unproductive stretch. Simply place one layer of rock across the bottom of the stream. The result is, interesting pockets below the bottom cover.

Current can be speeded by extending a series of submerged wing walls down and across the stream from each bank. They can be opposite each other or unevenly spaced. Generally speaking the latter makes for more interesting water.

If the improvement work protrudes above the surface the stream has an artificial aspect and the stonework becomes a regular snake incubator. Furthermore if the walls are submerged the water running over them prevents the collection of great pockets of silt behind the walls.

Anchored logs and brush along the banks serve the same purposes as the stonework in that they furnish cover for trout and a home for the food of trout. This type of work is at its best adjacent to fast water and arranged so that the logs or brush, or better yet the combination of the two, is located in the backwater or eddies extending to the edge of the fast water.

Overhanging foliage affords shelter from mid-summer sun and is responsible for a certain amount of food finding its way into the stream. Willows are the easiest and most practical to grow, however, they are an intolerant tree and must be planted in the open where they are subject to plenty of sunshine. Silky dogwood and black alder are fine overhanging shrubs which require "wet feet."

(Continued on page 15)

THE SHAD ARE RUNNING

By D. HERBERT SYFRIT

Harold W. Hood, Coatesville, is an enthusiastic fisherman and likes to share his angler zeal with a friend.

And so it was that he turned to me one night, as a group of us sat in the East End Sportsmen's Club headquarters, Coatesville, and asked if I would like to go along with him and Ralph Myers, as they planned an early morning fishing trip for shad down along the Susquehanna River at the mouth of Deer Creek, near Conowingo Dam, in Harford County, Maryland.

Being a complete novice at the game, my first thoughts on the subject were none too zealous. (Hoody said I would have to be up by 3:30 a.m. and be ready to leave Coatesville by 4 a.m.) But after he assured me the fishing would only last about two hours and that we would be back in Coatesville by 8:30 or 9 a.m., I reconsidered and accepted the invitation.

After all, I did want to see how two of the most prominent members of the East End Sportsmen's Club went about the task of "whipping a rod," so to speak.

It was 4:15 o'clock on the morning of Thursday, May 8, 1941, as I sat on the front porch and waited for my fishing friends to pick me up, that I began to wonder if it wasn't all a big joke. The rain came down in light but steady drops and glistened against the lamp-lit telegraph pole near the porch. Up and down the dark street I glanced but Hoody's automobile was nowhere in sight.

At 4:30 a.m. I walked back into the house of Deputy Coroner H. E. "Doc" Williams, Jr., where I room in Coatesville, and was mad enough to call Ralph Myers (I don't know why it wasn't Hoody) on the telephone to find out for sure if the boys had not been pulling my leg the night before. The boys at the East End Sportsmen's Club are like that.

However, no sooner had I asked for Ralph's phone number than I heard an unmistakable automobile-horn toot out front. Hanging up the receiver, I clambered outside once more. There was Hoody and Ralph, sure enough. Ralph looked at me and laughed. Reading my face, he said: "You didn't think a little rain would bother us did you"?

I was glad to see Hoody and Ralph and passed off the latter's remark with: "I had begun to think you were 'kidding' me and were not going fishing."

With Hoody at the wheel we made the 40-mile trip in one hour flat. When Harold pulled his auto to a stop on the dirt road which extended deep into the back country along the west bank of the Susquehanna, it was 5:25 a.m. The morning was cloudy but grey streaks of dawn were unmistakably breaking across the river to the east.

Hoody and Ralph pulled on hip boots and grabbed their casting rods with drone bait. Ralph ran on ahead as Hoody was kind of slow pulling on his boots. I waited and walked with Hoody as he led the way across a single railroad track bridge which spanned Deer Creek, just before it tumbled into the Susquehanna.

Ralph had not crossed the bridge but ran straight eastward to the river and was al-

ready standing in knee-deep water, casting out into the shallows.

Hoody mumbled something about knowing where there was a better 'place'. He crossed the railroad bridge to the other side of Deer Creek, down the bank and out to the mouth of the creek where it joined the Susquehanna. Then at an extended point of earth, he started to cast his line.

Down the river about 150 yards, Ralph could be seen in the cloudy and misty morning.

Hoody brought in a small white perch at 5:40 a.m. But to my amazement, he unhooked and threw it back into the river with the comment: "That's the first time I ever caught a perch with drone bait". Shocked, I batted a mosquito and asked Hoody why he did not keep the perch. "Too small," he replied, casting all the time.

Only five minutes later, however, Hoody hoked a shad and hauled it in much to my delight. Another shad jumped from the river nearby as I grabbed the fishing basket and looked inside at the fish.

In another minute Ralph yelled up the river that he had hooked a small perch.

I watched Hoody's line as the shad followed the drone right up to the surface but did not strike. Hoody grew tired and waded out to a pile of rocks, sticking up out of the river. The sky started to clear up somewhat and the sun, itself, threatened to come up over the east bank. Clouds kept it hidden, however.

Hoody caught another white perch and also, what he termed, a 'wire haired eel'.

Down the river, Ralph was pulling in his line and a large fish could be seen dangling on the drone bait. Ralph said it was a good sized 'yellow perch'. At least, he did not throw it away.

Meantime, Hoody was having some bad luck. First he hauled in a young tree from the river bed. Then a bolt loosened and fell off the handle of his easting rod. He had to go back to the auto and get a fly rod which did not work as well under the conditions.

Ralph had moved his position and was now standing at the creek mouth but on the opposite side from Hoody. Suddenly, a flick of the wrist and a swirl in the water proved that Ralph had a strike. This time he came up with a fairly large shad. "They are bitin' now," asserted Hoody.

"Yep," said Ralph as he nipped another small perch.

Encouraged by the last few strikes, Ralph and Hoody held on to about 7:25 a.m. Their luck was gone, however, and they did not get any additional strikes.

"We better be getting back," Hoody said to Ralph. "Anytime your ready", answered back Ralph. That sounded good to me as I wiped a couple of mosquitos from the back of my neck.

Standing on the river bank watching Ralph pick up his shad and yellow perch, I asked him what the idea was in throwing back those white perch. A slow grin rippled across Ralph's face as he replied: "Why if we took a fish that size back to Coatesville, they would run us out of town".

Shad Unusually Slow Coming Up Delaware

First of the Season As Yet to be Netted at Fishery

SUCKER CATCH IS POOR

New Hope, April 25—In spite of the fact that a number of attempts have been made to net shad at this place and Lambertville, across the river from here, not one has been caught, according to William Lewis, one of the most extensive fishermen in this part of the country.

According to Mr. Lewis, who has been engaged in shad fishing for years, these fish just don't appear, and when the nets are hauled in they contain only suckers, and only few in number at that. Why the shad have not made their way up the river this far is not known, nor is it known when they can be expected. All the fishermen can do is to cast their nets and hope for the best.

Although the labor shortage has hit this section, Mr. Lewis has rounded up a erew of about seven men to assist with the work. Some of the volunteers are employes of the Union Paper Mills Company, here.

All the suckers caught thus far this season seem to show no signs of fight, which leads fishermen here to believe they are suffering as a result of the contamination of the water, which, it has been said, may be due to the paper mills in the upper sections of the Delaware river and the steel mills in the upper reaches of the Lehigh.

Mr. Lewis so far has been using the sucker nets which have a finer mesh than the shad nets. When the sucker fishing is at its best one night's work, which may include three or four hauls, will result in a catch of three or four hundred pounds, but so far this season each haul of suckers netted between 40 and 50 suckers.

Results at the Scarborough fishery on this side of the river, where it is operated by Joseph Corrigan, have been as poor as at the Lewis fishery.

The fishermen, however, have not given up hope because it may be somewhat too early in the season for shad to make their run. It has been pointed out that large hauls have been made in this section as late as Memorial Day.

When the shad fishing season is in full swing operations begin at Sunday midnight and continue throughout the entire week until Saturday noon. The fishing of shad is not permitted over the weekends.

Although larger hauls of shad have been made, fishermen here consider a haul of 10 to 15 good. In addition to supplying local trade when the shad are running heavy, Mr. Lewis sells many of the fish to markets in Philadelphia and New York City, although a majority of them go to Philadelphia as soon as they are caught here, they are packed in ice and placed in barrels and sent to the market.—Doylestown Intelligencer.

DICK FORTNEY writes:

If some added weight is necessary to get bait down deep, use split shot instead of large sinkers to avoid snagging. It may take more time to attach half a dozen shot to the leader, but they will pass over many an obstruction that would snag a sinker.

Casting Tournament at Willow Grove Park

The MIDDLE ATLANTIC ASSOCIATION OF CASTING CLUBS has selected Sunday, June 18, 1944, as the date of the SEVENTH ANNUAL M.A.A.C.C. Tournament, to be held at Willow Grove Park, Willow Grove, Pa.

Contestants representing fourteen member clubs from various counties of the Schuyl-kill Valley will vie for honors in the following events: Fly Casting for Accuracy; Fly Casting for Distance; 5% oz. Plug Accuracy; 5% oz. Plug Distance; Surf Average and Surf Longest cast. To the foregoing six events which have been scheduled annually in the past, there will be added this year a 3% oz. Plug Accuracy event, in which rules will be the same as in the 5% oz. Accuracy, except that 3% oz. Accuracy targets will be placed at unknown distances between thirty and fifty feet from the casting position; whereas, 5% oz. Accuracy targets are placed at unknown distances between forty and eighty feet from the contestant.

There will also be Surf Average and Surf Longest Cast events in which special tournament tackle may be used.

In the seven main events of the M.A.A.C.C. Tournament, however, only everyday fishing equipment will be permitted—that is, equipment which is used by the majority of folks as they actually fish on the streams and at the surf, instead of especially "rigged up" outfits such as are permitted by other associations. The Middle Atlantic Association of Casting Clubs, since its organization in 1938, has sponsored events requiring fishing tackle of standard manufacture in order to enable ALL FISHERMEN to enjoy tournament casting, instead of limiting the sport to the few who can procure unusual and expensive rods, reels, etc. Scores made in the main events of the M.A.A.C.C. Tournament, therefore, are NATIONAL SCORES with EVERYDAY FISHING TACKLE. Present national champions (winners of the 1943 M.A.A.C.C. Tournament) against whose titles contestants will cast June 18th are as follows:

- 1. Plug Accuracy—1st, Skeets Anderson, Lower Merion (Score 95); 2nd, Arthur Clark, Holmesburg (Score 93.7); 3rd Charles Stocker, Pennsylvania. (Score 93.5).
- 2. Plug Distance—1st, Barney Berlinger, Pennsylvania. (218 ft.); 2nd, Arthur Clark, Holmesburg (203 ft.); 3rd, Charles Stocker, Pennsylvania. (174½ ft.).
- 3. Fly Accuracy—1st, Raymond Nierle, Pennsylvania. (Score 88); 2nd, Edward Weigmann, Pennsylvania. (Score 86); 3rd Howell Dietrich, Lower Merion (Score 84).
- 4. Fly Distance—1st, William Durr, Holmesburg (75 ft.); 2nd, Arthur Clark, Holmesburg (71'3"); 3rd, Howell Dietrich, Lower Merion (69 ft.).

(NOTE: Highest individual scorers in ALL FRESH WATER EVENTS--Arthur Clark, with 6 points and Raymond Nierle, with 5 points).

- 5. Surf Longest (with REGULAR FISHING TACKLE)—1st, Harold Lentz, Dover (356 ft. 6 in.); 2nd, Raymond Nierle, Pennsylvania. (315 ft.); 3rd, Barney Berlinger, Pennsylvania. (313 ft.).
- 6. Surf Average (with REGULAR FISHING TACKLE)—1st, Harold Lentz, Dover (347 ft. 7 in.); 2nd, Raymond Nierle, Pennsylvania. (309 ft. 4 in.); 3rd, Barney Berlinger, Pennsylvania. (288 ft. 7 in.).

Surf Events under rules of Asso. of Surf Angling Clubs (with tournament equipment —not with everyday fishing tackle):

- 1. Surf Longest—1st, Harold Lentz, Dover (423 ft.); 2nd, Bert Bennett, Dover, (365 ft.); 3rd, Barney Berlinger, Pennsylvania. (292 ft.).
- 2. Surf Average—1st, Harold Lentz, Dover (375 ft.). No others placed—"Breaks" in their lines eliminated several in this event.

(NOTE: Highest individual scorer in ALL SURF CASTING EVENTS—Harold Lentz.) Standing of Highest Averaging Clubs in all eight events:

1. Pennsylvania State Fish	and Game Protective Asso	16 points
2. Dover Fishing Club o	f Philadelphia	14 points
3. Holmesburg Fish and G	ame Protective Association	9 points
4. Lower Merion Rod ar	nd Gun Club	5 points

Novelty Plug Accuracy Winners: 1st, Wm. Sheridan, Bethlehem Casting Asso. 2nd, Ernest Jenkins, Lower Merion.

Highest 4-man team in Plug Accuracy—Bethlehem Casting Association.

The Seventh Annual M.A.A.C.C. Tournament will be held "rain or shine" on the date scheduled. Entries in all events will be open from 10 A.M. until 3 P.M.

If your club is not affiliated with the Middle Atlantic Association of Casting Clubs and if members of your organization would like to participate in this Tournament, they may do so if your club will send \$5.00 to the M.A.A.C.C. Secretary, Mrs. Ellen A. Dietrich, 1141 Roosevelt Drive, Upper Darby, Pa. This amount will cover a year's dues for your organization and will permit any member or members of your club to cast in any or all of the tournament events and to compete for prizes, which this year will be War Bonds and Stamps. Prizes in most events, as in past years, will be awarded on a class system basis, so that the BEGINNER has an equal opportunity with the more expert to be among the WINNERS. (And with many of M.A.A.C.C.'s best casters now in the service, your guess is as good as anyone's as to who will be the winners this year!)

The management of Willow Grove Park is making extensive arrangements for the enjoyment, comfort and convenience of M.A.A.C.C. casters, their families and their friends on the Tournament Day, and Willow Grove INVITES YOU to RELAX FOR VICTORY at the Park JUNE 18th!

FIELD AND STREAM

By R. E. ANGST

Hooks for use in fly tying are very scarce. For that reason Bob Lincoln's advice on what are good hooks is not as appropriate at this time as it would be in normal times. However, many of us have old, used flies in our possession and these can be taken apart and the hooks used over again. Bob Lincoln's experience has pointed out, and we quite agree with him, that the best hook for a fly is one with a straight bend, that is to say, the point or barb parallel with the shank or stem of the hook. Some flies are tied to what is known as the off-set hook. It will be found that two-thirds more fish will be hooked with the straight bend.

By far the best fly hook to be had is the so-called round bend. These are variously listed but around here more often as the model perfect. If your flies have round bend hooks you are certain of about the best hook you can obtain.

Flies are eyed or snelled. A snelled fly is one to which a bit of gut is tied to the hook shank when the fly was made. To the end of the snell a loop is tied. This loop in turn affixes to a loop on the leader.

As opposed to this, the eyed fly has no snell, just the eye, which the fisherman attaches directly to the leader. Mr. Lincoln says: "By far the best to use is the eye fly." He further states a point it is well to remember, if snelled flies are used the snells of the flies should be the same color as the leader. If they are not, the trout will notice the difference. If snelled flies are not kept straight they will assume a coiled, bent or unnatural appearance in the water.

Anglers are always interested in the weather. Is it possible to tell future weather by atmospheric or sky conditions? Usually there are certain conditions that indicate what the weather is going to be on the morrow. Among the most reliable of these we find: the sun that sets in a red sky without rolling and massed-up jumbled clouds foretells fine weather for the coming day; when the moon stands out sharp and clear without a fuzzy haze or mist around it, fair weather is indicated for the next day at least. A dim or haze-obscured moon indicates the direct opposite.

A wind holding steadily to the west quarter generally means a continuance of fine weather. Directly opposed to this is a steady wind out of the east invariably bringing rain. When everything is still, with little breeze, and sounds carry far in the late afternoon, evening or night, fine weather is almost certain. If the east glows red in the morning the possibility is that there will be rain before the day is out. A gray morning sky would seem to portend rain, yet the direct opposite is true. A gray morning means a clear day. A foggy early morning is almost invariably the forerunner of a clear day. Grass heavy with dew at night indicates a bright and clear day for the morrow. If the grass is dry there is a strong possibility of rain tomorrow.

-Pottsville Journal.

Buy
BONDS & STAMPS

Willow Planting Proves Aid To **Providing Food for Fish**

By JOE O'BYRNE

Harry E. Weber of Bellefonte, has pre-pared a pamphlet, "Willow Planting Along Streams.'

Weber states that "The willow has been selected by the State Fish Commission for planting because of its unusual sprouting ability. Live pieces of willow, if planted under favorable conditions, will sprout with amazing ability and grow to large, thrifty

Aids Conservation

The value of planting willows along the streams cannot be over-estimated. The willow aids in soil conservation by sending out an interlacing network of roots that bind the soil. The roots absorb warm runoff water following a rain, releasing it gradually, cooled, without saturation of mud, and in that way prevent disastrous flood washouts.

Mature willow trees are of inestimable value to streams and the fish in them. The shade cast by them offers a wonderful retreat from the heat of the sun's rays. Insect life also abounds in the dense foliage of the willow and when the roots are exposed in the water, along the bank, they harbor aquatic life that provide plenty of food for the fish.

The planting of willow cuttings along the streams of Pennsylvania is one of the logical means of helping prevent floods, the wrecking of streams by the erosion of the banks, increasing the amount of fish foods and adding to their beauty.

If any Sportsmen's Clubs, Boy Scouts, or other interested individuals or groups are interested in planting willow shoots along streams, a copy of this pamphlet can be procured by writing to Harry S. Weber, Board of Fish Commissioners, Harrisburg, Pa.

-Philadelphia Inquirer.

ROD AND GUN NEWS

By LYLE SIMMONS

Among the many diversions pursued and enjoyed by Pennsylvanians, none perhaps holds the same charm of enthusiasm and anxiety as that of the fisherman awaiting the opening day of the trout season. The hours spent in getting ready, in cleaning and replacing tackle, preparing for the dawn of the 'opening day,' holds a thrill second only to the 'smash' of a fighting bundle of speckled dynamite.

To the angler, the skill and art of fishing becomes a part of his very life. The sport and recreation; the fun and enjoyment derived in our great outdoors; along picturesque streams provides the definite feeling of contentment, ease and restful enjoyment, nowhere else to be found.

The 1944 trout season opened with an overcast sky, and about 9 A.M. rain began to fall, in a very short time all who were not properly clothed for the occasion were forced to give up. The second day of the season the rain continued to fall until about 1 P.M., by this time the streams were getting high and muddy.

Some nice catches were reported, although most trout were small, ranging between 9 and 10 inches.-Columbia News.

Sportsmen Vote Against Closing of Streams At Meeting

At the meeting of the Black Forest Conservation Association the motion, which was held over from the previous meeting, that of closing the Allegany River between the 7th Street bridge and Chestnut Street bridge, also Mill Creek from Mill Street bridge to junction of the Allegany River, was voted

The plan as originally proposed, was believed to have a twofold purpose, namely, in providing Coudersport with a display area where local people and tourists alike would be able to view the large trout which would be placed in these waters within the restricted sanctuary.

This was believed by many to be the means of creating state-wide interest and ultimately resulting in large numbers of tourists visiting Coudersport annually, thereby benefiting merchants and townspeople.

Likewise such a plan was believed to result in providing a natural spawning ground, which, of course, would eventually improve the fishing in adjacent streams.

The ensuing discussion of this topic became quite heated as several sportsmen felt that it deprived them of the right to fish their favorite haunts. It was finally decided that instead of improving sportsmen's relationship, such a measure would only create dissension and so was voted in the discard.

A report was made on the trout stocked in Potter County with the promise of still more to be released nearby. It is the prediction of those who have heard these reports that nimrods should have a successful season.—Potter County Journal.

Sportsmen Will Aid Fish Warden

The Monroe Mountains Sportsmen's Association executive committee named chairmen and committees to direct various association activities in 1944 and completed plans for cooperating with Fish Warden Floyd Bachman during the spring stocking campaign.

The executive group met at the call of President Max Avery. Plans were also made to hold the next session in the Thomas P. Lambert, V. F. W. Home in Stroudsburg some time during the next week.

Considerable attention was devoted to the fish committee, one of the first groups to be operative this spring. Tom DeVivo was again made chairman of the committee which was expanded considerably to insure aid to Warden Bachman in his stocking program.

Committee members will be notified of stocking operations so that ample delegates may be present to assist Mr. Bachman.

Dr. Samuel F. Sullivan heads the program and planning committee.

Ed. Eyer will have charge of the game committee.

E. Clyde Pyle will direct activities of the forestry group.

Olaf Pedersen will handle the affairs of the membership committee.

Both Fish Warden Bachman and Game Protector Arthur N. Frantz were present. Mr. Frantz stressed the fact that trappers must have their beaver pelts stamped by him before selling the hides.

-Stroudsburg Record.

County Fish and Game Membership Record Smashes With 1,800

President Louis S. Winner of the Clinton County Fish and Game Association today paid high tribute to J. A. Painter who, as secretary, spearheaded the last two annual drives for membership and last night reported that in two years the paid enrollment skyrocketed from less than 500 to more than 1,800, a remarkable advance.

Last year the paid-up membership was 683 excluding the 31 free memberships to those in the armed forces, making a total of 714.

The 1944 drive was started with the idea of boosting the number to 1,000 but before the campaign got under way the figure was upped to 1,225, a figure reached by setting quotas for the various districts. Both numbers proved to be too small as the total reached 1,813 yesterday.

-Lock Haven Express.

WITH ROD AND LINE

By CLYDE ROLLER

Just how long fishermen have been collecting flies is not certain, but there is evidence of their use for nearly 2000 years. Fly casting as we know it today, however, is a development of comparatively recent years.

Perhaps the earliest written record of artificial fishing lures is seen in a query by the Roman author Martian, who, about the beginning of the third century, A. D., wrote:

"Who has not seen the scarus rise, devoyed and killed by fraudful flies?" The scarus was a parrot fish of the Mediterranean, of excellent quality and highly esteemed by the Romans. The teeth of the scarus are consolidated in such a way as to give the fish the appearance of having a bird's beak.

The first flies probably were primitive but fly-tying now is complex and varied. Materials used in turning out the lures are obtained from many sources and there are approximately 500 conventional patterns of trout flies, besides the numerous variation conceived and produced by individuals who tie their own.

Interesting stories go with some of the various trout flies. For instance, a tale is related in connection with the "Professor," one of the more commonly used flies, which was originated by Professor John Wilson, who wrote under the name of "Christopher

According to this story Professor Wilson, a noted fisherman of his time, was fishing and ran short of flies. He fastened several buttercup petals on a hook with bits of leaves to imitate wings. The use of this improvised lure was so successful that it led to the making of the "Professor" with its yellow silk body and brown mallard

The "Coachman" received its name from Tom Bosworth, the royal coachman for three British rulers, George IV, William IV and Queen Victoria. Bosworth was a skilled fly fisherman. His fly, which has white wings, peacock herl body, brown hackle and gold tag, and is one of the most popular in use. A variation is the "Royal Coachman," which has a narrow band of scarlet silk around the middle.—Harrisburg Evening News.

VACATION, \$6.50

(Continued from page 7)

volunteered to do the cooking. Bucky won the job permanently after he rolled the fish in pancake flour. Just try it some time!

We ate like kings. For instance, the average breakfast (for just one of us, that is) included six big pancakes, three eggs, two cups of coffee, and two or three slices of bread thickly coated with jelly. We ate just a snack in the middle of the day. The evening meal had fish as its main item, and never once did we become tired of it. And always there was some kind of lunch at bed-time.

We varied our program to have our biggest meal at noon one day, and thereupon hangs one of those tall stories that is bound to develop in a week in camp. This one, however, is absolutely true.

The rest of us were lolling around camp, waiting for the call to dinner, when Bucky informed us that he doubted he had enough fish to satisfy our appetites.

fish to satisfy our appetites.
"All right," said I, cute-like, "I'll step out there to the creek and catch you a couple more."

"And I'll clean 'em," said Brooks, going along with the gag.

Bucky called our bluff.

"You two get two more fish or go hungry," he snorted. "The ones I'm cooking are for Bill and me."

I picked up a casting rod, snapped a Silver Minnow on the leader, and walked to the edge of the water. Brooks strolled along, sat down on a flat rock, and solemnly opened the blade of his jack-knife.

Bucky and Bill looked silently on.

I cast the spoon, retrieved it not more than ten feet through the water, and felt a heavy strike. I horsed in a bass a foot long and tossed it to Brooks. He just looked up at Bucky and Bill, grinned broadly, and went to work. I ignored the kibitzers.

"Remember, I said two fish," Bucky called. Brooks had just finished cleaning the bass when there was another solid strike on the spoon, and I hauled out a pickerel about 17 inches long, tossed it to Brooks, reeled in the line, and went back to camp.

Nothing like that ever happened to me before. And no food I ever ate tasted better than those two fish I had to catch—or else!

The only rule governing the camp was that each one of us had to pitch in and get the work done—the water-bag was filled

once daily; each evening one of us made a trip to the farm house for milk and eggs; meals were prepared; dishes washed; trash and garbage burned.

The sleeping was swell. We put ground-cloths on the cots, then spread our blankets and pillows. That kept us warm at night. We aired our blankets daily—on a rope stretched between two trees, because Brooks discovered the first afternoon that a blanket spread on the grass draws moisture from the ground even in hot weather.

By careful planning, our gasoline supply enabled us to make half-day journeys to several lakes in the vicinity. We enjoyed the boat rides even if we didn't catch any fish. Brooks had one hooked in one lake, but it snapped his line—so the rest of the week we could talk about the lunker that got away.

We had no regular pattern, but after a day or two the general program was to arise when we felt like it, eat a whopper of a breakfast, then fish a couple of hours. In the middle of the day we had lunch and then either slept or swam. We fished from early evening until we got tired, then returned to camp and went to bed.

And, by the way, we wore our wool socks in bed. It got quite chilly at night along the stream, and we found that we didn't mind the cold so long as our feet were warm. That's a point worth remembering.

Bill, so far as fishing went, was the baby of our party—and so he caught the biggest fish of the week. It happened in the light of a full moon on a long pool in the creek about two miles below camp, when Brooks, Bucky, and I initiated Bill into the mysteries of fishing for bass with deer hair bugs at night.

For a couple of hours Bill had an awful time. He wrapped his line around his ears and stuck the bug in the seat of his trousers. He skidded on unseen stones. He swung at gnats and other insects that love to feast on night anglers. He cussed just a little.

But finally he achieved a perfect cast. He gave the lure a gentle twitch, and a bass whaled into it.

Yells, at first of surprise and then of delight, shattered the still night, and we all gathered around to watch the battle.

"Don't let him pull you in," advised Brooks nelpfully.

"Have you got that fish, or has it got

you?" Bucky inquired ironically from a big log where he sat smoking a cigaret.

Darn it, Bill was my brother, and I wasn't going to see him lose that fish. I made a few suggestions for maneuvering the bass to shore, and Bill finally beached his prize.

"Beat that, you wise guys!" he challanged as he turned his flashlight on the big, fat trophy.

It made a swell dinner the next day.

The five days we spent in camp seemed like five hours—except that the long stubble on our chins (we manfully kept our vow not to shave during the whole week) proved we had been away from home a while.

Whatever we did, we had to keep an eye on Bill, for taking pictures is his profession, and before the week was out he had snapped us cooking, washing dishes, scrubbing ourselves in the creek, and at various other activities.

He took the pictures used with this story. He had a gadget on his camera, sort of a delayed-action trigger, which allowed him to get things all set and then to hustle into place so he would be in the picture with the rest of us.

We made a lot of friends during that week in camp. Our farmer host's family visited us regularly. A couple of boys from a farm up the creek dropped in almost every evening.

And to establish the point that a camping trip can always furnish something out of the ordinary, I'll tell you about a trip we made one evening to a cross-roads store a couple of miles away. It was a really big one-room place, and it contained almost everything under the sun. But as we entered we couldn't locate any clerks.

A young farmer showed us where the ice cream was kept, then explained: "Just help yourselves and pay later."

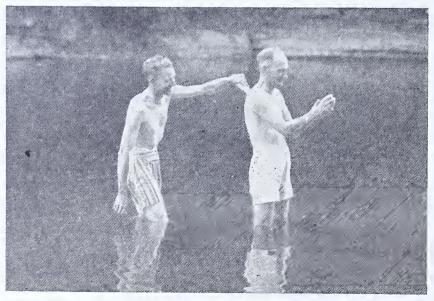
We acquired some cigarets, a sack of candy, some matches, a couple of flashlight batteries, and other odds and ends.

Then I asked another customer: "Who takes the money?"

"That woman over there," he replied, pointing to a neatly dressed woman chatting with some friends in a corner of the store.

We approached her.

"How much do you owe me?" she asked. We stuttered at that, then Bucky went over a list of the stuff we have selected, and



Saturday night in the fishing camp.

she told us the cost. Her apron pocket was her cash register. She made change, thanked us, and turned to other patrons.
"That's what I call a store," Brooks re-

marked.

The last day of the trip arrived—all too quickly for all of us-and we came to the task of settling accounts. Bucky and I had been the purchasing agents all week. We had lists of the stuff we had originally bought and that we had purchased in camp. We did some figuring, then announced the result:

"\$6.50 for each of us."

And that included not only the food, but even the gasoline consumed on the trip and all incidentals, including a fair fee to the farmer whose land we had used.

The fellows insisted on checking the list. They couldn't believe that four fellows could spend five full days camping and living like kings for \$6.50 each. But the audit proved us correct.

Brooks, Bucky, and I are going back this year-back to the very same spot. Bill won't be with us, though. He'll be taking pictures for Uncle Sam's navy.

State Forests' Trout Streams Well Stocked

During the 1944 trout season the more than 2500 miles of well-stocked streams in the state forests will provide many hours of needed recreation and thousands of pounds of food for Pennsylvania fishermen.

These mountain streams are open to the public. Dense forest growth along many of them provides excellent shade, food and

protection for trout.

Fish stream improvement within the state forests has been carried on for a number of years, Secretary James A. Kell, of the Department of Forests and Waters, points out. The object is to develop and maintain conditions most favorable to the growth and production of fish life. By the use of small dams, log covers, deflectors and other devices, changed conditions of flow may be made to retore a balance of productivity of the stream. The dams which have been built are low obstructions in the stream bed and extend from bank to bank so as to raise the water level. They create a pool and are so constructed so the fish can have easy passage in all directions.

Deflectors are constructed of logs, stones and other materials which are placed across a portion of the channel to concentrate the flow in a limited area and at the same time increase the water velocity. The fine material which is picked up by the current is deposited in the still water behind the deflectors or in pools farther down the stream. The pools which are formed as a result of these deflectors make good sites for the growth of aquatic plants which provide fish food and at the same time furnish shelters.

Small mountain streams abound in the State Forests and the construction of these pools have increased breeding facilities and healthful conditions for fish life. As a result, better fishing and more fish are possible for the Pennsylvania sportsmen.

For the purpose of giving shade and shelter to fish life, the Department of Forests and Waters refrains from cutting within 50 feet of streams, under the Department rules for timber stand improvement.

-Nicholson Examiner.

A TROUT STREAM PRESCRIPTION

(Continued from page 10)

Willows of course can be grown from shoots which are stuck in the proper places. The shoots must be cut from new or green wood. We had best results from shoots about five feet long with a foot and one half to two feet, placed in the ground. The holes in which they were inserted were made with a small digging iron. Plantings of this nature withstood summer droughts, whereas shoots under two feet in length frequently died in the dry top soil. The longer shoots are less likely to be trampled by fishermen.

Our group experimented with a willow which we believe is perfect for this purpose. It is a tree which in appearance is half way between a weeping or Bohemian willow and the native willow. The weeping willow readily breaks up in storms and the foliage is so low it drags in the water. The native willow is not a particularly beautiful tree and the foliage is not dense. The "Cross", as we call it, is the average of the two and a very beautiful tree. After the first year you can expect a growth of five feet a year when properly planted.

Silky dogwood is an attractive red stemmed bush, which does well right along the very edge of the stream. Black alder is equally good and has a powerful root system. We have in one section a fine undermined bank where the current cuts deep under the roots of this sturdy shrub.

In conclusion we believe the following to be the facts in connection with stream improvement:

- 1. Subsurface improvement is superior to work which protrudes. The only practical use for work above the surface is cribbing along the bank to prevent erosion.
- 2. Quantities of anchored brush and logs and the combination thereof, properly placed, is as effective as the stone work, but it is not as enduring.
- 3. Overhanging foliage, where there is no valuable aquatic vegetation, furnishes some food and cover, however the best of trout waters have areas exposed to sunlight, as well as shaded spots.
- 4. The most practical and easiest section of stream to improve is one which has a medium current and fairly high banks.
- 5. About the only thing which can be done to a slow meandering stretch of water with low banks is the anchorage of brush and logs and the planting of willows, shrubs, and aquatic vegetation. Water cress is ideal but cress requires limestone water.
- 6. About the only constructive work which can be done on a shaded wooded stream of rapid descent is the placement of very heavy rocks which the current cannot move into the bed of the stream, and the cutting of foliage so that some sunlight can play on the water in spots at times. Dams placed in fast falling streams quickly fill with sedi-

The purposes of stream improvement are three fold: first, to increase the food supply of the stream; second, to afford cover for fish; and third, to provide more interesting water in which to angle. It is worthwhile for clubs and individuals to investigate the possibilities of such activity for chosen waters. It is really play, not work, and many will probably be delighted to assist.

Sportsmen Send Fishing Equipment to Outposts

Members of the Wissahickon Field and Stream Association adopted the program of sending fishing tackle to men in the armed forces when they met at regular session at the Legion Hall, Ambler.

The program is a part of a wide spread movement. The Ambler men will contribute spare equipment or broken equipment to the shipment that will be sent to the headquarters in Philadelphia, where everything will be assembled, repairs made and then sent to distant outposts. All members will collect the material.

Henry Deens and Harmon Kinney were appointed to serve on the committee that is planning a permanent memorial to men in the armed forces.

Charles Mulvaney gave a report from the fish committee, explaining that the pond at Keasbey & Mattison will be seined for fish as soon as the ice thaws. The fish will be placed in the club's reserve.

Joseph Noble reported the trapping of seventeen rabbits. Thirteen rabbits and one squirrel for liberation in this section was reported by Warren Fleck. Three shelters were erected and fifty to seventy-five pounds of food was put out for the game while the snow was covering the ground.

Charles Hahn read the treasurer's report, showing \$464.14 on hand, with \$296 invested in war bonds.

Charles Illingworth, president, presided. -Hatboro Public Spirit.

Fish First Stocked In Nepahwin 1874

Interesting Accounts of the Sport in Dr. .Parson's Diaru

The following interesting account of Canton's early devotees of Izaak Walton was recorded in a diary kept by the late Dr. James Parsons which is now in the possession of his niece, Mrs. Leon Keagle:

In 1874 a subscription paper was circulated in Canton by which money was raised to defray the expense of putting small mouth black bass in Lake Nepahwin. About twenty fish, weighing from one-half to one and onehalf pounds were put in. They were caught at Easton, Pa., with hook and line from the Delaware River and about three days was required to get them.

Theodore Pierce and E. J. Angle went to Easton for them and after they were caught the Fish Commissioner, Howard J. Reeder, sent a man as far as Williamsport with them to see that the fish had proper care.

The expense paid by Theodore Pierce for the black bass and the trip to secure them amounted to \$64.50, which was raised by popular subscription among the sportsmen of the town. When the fish were safely placed in the waters of Lack Nepahwin, then known as Gillett's Pond, they represented an investment of about \$3 each.

This is the first record of fish being stocked in any lake or stream in this vicinity. At that time, and for some years thereafter, brook trout were so plentiful that catches of two or three hundred of the speckled beauties were a common occurrence. Local sportsmen often went on two day fishing excursions to Rock Run and other nearby streams of Sullivan and Lycoming counties.

-Canton Independent Sentinel.



Plate No. 6. The start of the Spey cast. False casting. Note, the rod shows the bend caused by starting the forward cast—an interesting illustration of the speeded-up timing used in false casting.



Plate No. 7. Change of Direction.

SPECIAL CASTS

(Continued from page 5)

rolls to work out the line, thus wetting the fly. There is no room for a back cast, and the trees overhead will not permit a Galway or a steeple cast. There are two ways to solve this problem, but the easier way is as follows.

Holding the fly with the left hand, strip line from the reel and switch it out through the guides with the same motion as that which is used in the simple roll cast. Repeat this process, working out line first with the forehand switch and then with the backhand switch, alternating as the loop grows, until you have a loop that reaches about halfway to the feeding fish. Execute the final preparatory switch backhanded so that the loop on the water will be in position for a forehand roll cast, lying slightly upstream from the direction in which you wish the cast to go. All this time the fly is being held in the left hand. Now, with the loop in position on the water, and one loop of slack over the fingers of the left hand, to be "shot" during the final cast (yes, you can shoot line in a roll cast) raise the rod tip and execute a simple forehand roll cast, with plenty of power, and release the fly as the loop of line begins to roll out across the water. The fly will carry over to its intended destination with the line fully extended. This is a surprising cast and one that sounds impossible on paper. Being difficult to illustrate photographically, you will have to take my word for it until you try it for yourself and see how nicely it works out. Use a short line at first until you learn the mechanics of the cast; after that, it is amazing how much line this cast will handle for you.

To Change the Direction of a Cast

To carry this problem a step further, suppose that the trout refuses your fly on

the first drift. Naturally, you wish to pick up your line and fly, dry them, and recast the fly so that it drifts once more over the feeding fish. With no space to allow a back cast of any kind, how are you going to do it?

Let us assume that the stream flows from left to right as you face it. Before attempting to pick up the line, strip in three or four loops of slack and hold them in your left hand. After the line has drifted downstream until it stretches out directly below you, extend your casting arm out as far as you can reach (to give as much clearance from the bushes as possible) and pick up the line with a forehand pick-up. Now, false cast, parallel to the bank, and gradually work out through the guides all but one loop of the slack line in your left hand. When you are ready to make the final cast, toss the back cast directly downstream and



Plate 9. The Galway cast is used to avoid obstruction. The caster turns his back to the direction of the target.



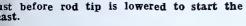




Plate No. 8. Completing the Spey cast. The direction of the line changes again. Note the wide bow in the line as the rod concludes its work.

fairly close to the surface of the water. Follow through with the rod and the casting arm, lowering the rod tip almost until it touches the water. As the back cast becomes fully extended, make the forward cast by swinging the rod tip upstream, around and out away from you at right angles to the bank, using a smooth, gradually accelerated motion, and finishing with a decisive "throwing in" of the upper rod. The line

will curl through the air, following the general path of the rod in its swing, and extend itself fully across stream, taking the slack line with it so that the fly once more will drift over the feeding fish. Plates No. 6, 7, and 8 show the three important stages of this cast. The Spey Cast.

Where there is ample room for the back cast, about the simplest method for changing the direction of a cast is the Spey cast,

so named by the late F. G. Shaw. To illustrate its use, suppose you are fishing a wet fly and you have just fished out your cast, the line extending downstream from you. You see a trout feed about forty-five degrees to your left, upstream and near the far bank. The problem is to pick up your fly, with as little lost motion as possible, and place it two or three feet above the spot where you saw the trout rise.

First, raise the rod tip until the line hangs down almost directly under the rod. Now, throw a forehand roll cast directly toward the far bank and at right angles to it. Before this cast has competed itself, and while the fly is still in the air, pick up the line and fly in a regular, simple back cast and then aim the forward cast at the desired target. The Spey cast is, in reality, merely an adaptation of the roll pick-up.

The Galway Cast

This is an easy method for clearing obstructions which hamper an ordinary back cast. Instead of risking unpleasant involvment with the trees or bushes behind you by attempting to clear them with an ordinary back cast, turn your body to the right and aim your back cast high enough to clear the obstructions by executing a regular backhand forward cast. In this way, you can make sure that your fly will not become hung up in the foliage. (See Plate No. 9) As the back cast travels to completion, turn and face the direction in which you wish the forward cast to go, and finish with the orthodox forehand forward cast. (See Plate No. 10) Care must be taken to aim the back cast high enough so that the line will not drop sufficiently to catch the tops of the bushes as the forward cast is made.

The Galway cast can be made by using the forehand for the back cast and finishing with a backhand forward cast. Again, by

(Continued on page 19)



Plate No. 10. The body is again turned in the casting direction at the completion of the Galway cast.

TYING BASS BUGS

(Continued from page 3)

member securely to the hook with Duco Individual tufts of deer hair are cement. then tied into place as shown at E2 and are worked around the gut in order to form the leg. Bind the hair to the gut as shown at E3. Add the other leg in the same manner and bend the legs into the position shown in the finished frog. Tufts of deer hair are then added to form the body until the front legs are reached. The front legs are formed in the same manner as the rear ones, with the exception that the gut need be only two inches long and the hair is tied in reverse to the rear ones. That is to say that the butts of the hair should extend to the front. Tie in the body hair in front of the fore legs and around the eyes and finish with a few turns of the whip finish. Trim the hair into shape to form the body and your frog is complete with the exception of the painting. You may want to experiment with a mottled body effect. A good combination is a green back with yellow outlines and either white or yellow throat.

Tying the mouse is quite simple as there are no appendages with the exception of the tail which is tied with the foundation. The best material we have found for this purpose is a strip of buckskin or deer hide from which the hair has been removed.

In tying the dragon fly an extra long shank hook is used. Ribbing silk or tinsel is tied in with the base before applying the hair. Wings for the dragon fly may be made from a variety of material ranging from various kinds of hair to hackles. These materials may be natural or dyed depending on the pattern you wish to imitate. Should you choose to use hackles, each wing should be composed of two feathers placed one over the other. After tying in the body hair, crop the body close around the hook up to the rear wings. Between the wings the body should be heavier to form the thorax. If the head is made rather large and equipped with "Banjo eyes" you will find that the bass will show a deeper interest in it.

The pattern of dragon fly with which we have had the most success is tied as follows. Body and wings, black; ribbing, silver; and eyes, large yellow spots with black centers.

A variation of the dragon fly type of hair bug is tied with a body of scarlet dyed deer hair with gold ribbing, wings of fox squirrel tail hair, and a brown hackle tied in at the front. The wings are tied at an angle sloping back and above the horizontal. This is illustrated at H. In smaller sizes this is an excellent lure for large trout. While most deer hair lures are intended to be used dry or floating, this one is especially designed to use where a bucktail would be in order. This bug and the one described below may be fished with a spinner for bass.

For want of a better name let's call this bug whiskerbug. They are sold commercially under various names. The rear appendage is tied in the same manner as described at A, only instead of using tail hair, body hair is used. Good combinations are alternate bands of red and yellow or white. Starting at the tail use white or yellow and alternate with red until the head is reached. The head may be finished in any of the methods described above. We use two turns of medium heavy chenille. Trim the body three quarters way around, allowing the bottom hair to remain full length. We had trouble having this bug ride with the wing up, so we tied several on specially prepared hooks. To the top of the hook shank we added a weight by building a hump of solder as shown at I1. This counterweight causes the hook point and the wing to ride upright. This is an excellent lure in weeds and it is a No. 1 pickerel lure.

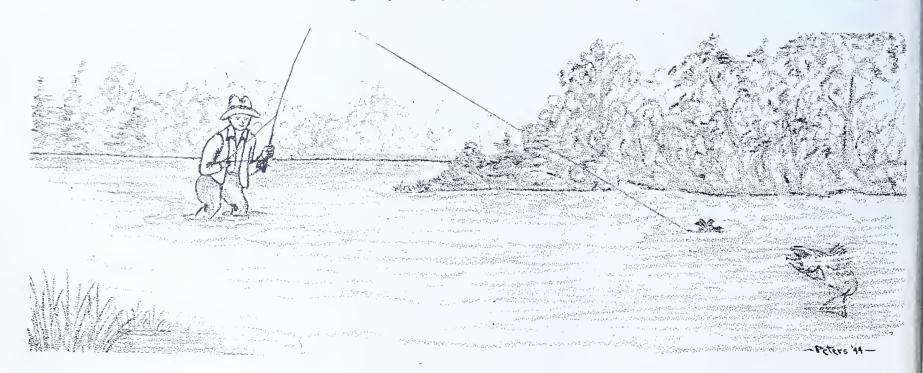
Figure J shows the trout bug, a creation of our own to which we are very partial, perhaps because it is so simple to tie. Nevertheless we have taken plenty of trout on it. We use it as a floater but when conditions demand, it brings results by fishing it very deep. It is simply a deer hair body which is trimmed before the wings are added. The wing is of the same material as the body and when tied in it is allowed to expand and pucker in all directions above the hook. The butt of the wings is trimmed to form a head. This is truly a crude little affair, but it does bring results, and after all that is what counts. If you don't think this bug has that come hither fish appeal, pull it through the water slowly at close range and note the tantalizing coaxing action of the wing. Try this fly about dusk over a spot where you know some conceited brown forbearer of Hitleristic progeny is sulking in customary Nazi manner, waiting for the arrival of the next winged flight, this time in the form of a moth.

I once had the pleasure of watching the reactions of a large brown trout while being tantalized with this little bug.

During the morning fishing on a comparatively small stream I raised this trout in an eddy bordered by alders overhanging an underwashed bank. He rolled over my dry fly and promptly retreated to the cover of his root lined home. The remainder of the day was filled with thoughts of this one trout and the pools that usually appealed to me held very little interest. That afternoon as I waited in camp for lunch I selected a new fine leader and one of the little black moths, which I gave a judicious treatment of line dressing to insure it's floating. That evening I went directly to the pool in question and waited. While absent-mindedly watching the yellow throat of a nearby frog expand and retract as he began sounding taps for the close of another day, I noticed a slight ripply of the otherwise placid water back beneath the alders. On closer observation I saw the full form of my quarry within fifteen feet of me, with his dorsal fin scarcely covered with water. I could see his every action, fins working in precisely timed rythm, and jaws moving not unlike a cow or sheep methodically chewing

I had previously chosen the spot where I was standing as it offered an opportunity to drift the bug down under the alders to the trout. The first attempt was an utter failure but exciting. The nervous tension of that fish was so pronounced that I was cock sure that he would strike. Slowly, cautiously, I retrieved the bug and tried again. This time he turned and looked over the lure only to ease back into his feeding position. Then I struck upon an idea. I crept back from the stream and changed to a gray bug, but instead of greasing it I dabbed it with wet silt and allowed it to sink. This time when it drifted down beneath the surface the trout abandon caution and came half way to meet it.

For a fleeting minute which seemed ages he tried every trick in his repertoire to eject the demon from his well disciplined



lower jaw. Finally in true brownie fashion he retreated beneath the bank to sulk. I hope the saints have forgiven me for my utterances which I recollected afterwards, were made aloud, and of a nature that would not sound good in print. Yes he did get away but as I stood there perspiring I vowed vengence, which I exacted the following week-and with the same type bug.

To get back to the bugs illustrated, the ones shown at K and L were first introduced to the readers of the ANGLER, as far as I know by Myron Shoemaker of Laceyville. We have used them for bass the past several seasons and have had some very thrilling experiences with them.

The Devil bug illustrated at M is a little more difficult to tie, especially in the smaller sizes, but with a bit of patience the average tyer can produce a very realistic looking bug. It will be noticed that in Fig. M1 at a, that enough room is allowed for tying the deer tail hair shown at M2-c. First fashion the body of deer hair and trim it to the shape shown at M1 allowing some of the untrimmed hair to remain for wings, then tie in the deer tail hair shown at c. This must be of sufficient quantity to form a casing for the body form M1. Bind the casing to the hook at a and apply a liberal coat of cement. Trim off the surplus hair at the head and tie in another wad of hair. This in turn is trimmed to form the head. Paint the eyes as previously described and a bit of red on the throat. We feel that after you learn to tie this bug properly you should be able to tie any other pattern with compatative ease.

Recently I had the pleasure of entertaining Mr. P. M. Lollick and Mr. William Swartz of the Game Commission Bureau of Lands, in my fly tying shop. As Mr. Lollick, who claimed to never have seen a fly tying "bug's" layout before, said, "A man at a fly tying vise is a picture of Patience per-

sonified.

After all, we tie our own flies as a hobby and if patience is an attribute worth striving for I know of no better place to practice it.

SPECIAL CASTS

(Continued from page 17)

stepping under the line, the caster can use the forehand cast in both directions. The method explained above always has seemed to be the easiest of the lot, in that it involves less body motion.

FISH KILLED BY OIL

Kane—The Kane Fish & Game Club today reported that trout by the hundreds in Castle Brook and Wilson Run had been killed by crude oil which flowed into the stream from a broken line at the headwaters of Castle Brook.

Boys at Sergeant were reported to have picked up trout 17 and 18 inches long which had been killed by the oil. Both streams had been extensively stocked with trout in

recent years.

Reports held that the oil line or leak or break had been repaired, but not before a sufficient quantity had flowed into the small stream to suffocate the trout. The local club has notified R. B. Chrisman of Kushequa, fish warden for this section, who is investigating the damage.—St. Marys Press.

LET'S GO OUTDOORS

PENNSYLVANIA ANGLER

. . . with Slim

The mention in this column about the laxity among trout fishermen to exercise stream courtesy and etiquette, brought forth a constructive suggestion and a sensible set of rules to follow.

It is the belief of the person submitting the ideas of "stream etiquette", that the average fellow does not deliberately violate these standards of fishing, but may simply be unfamiliar with them and plunder into a faux pas through ignorance. In addition, he indicated that the fundamentals incorporated were successfully carried out and have been proven practical, but the regulations governing an angler's conduct may be modified or elaborated upon. Here are his basic set of "commandments" for

"STREAM ETIQUETTE":

- 1. Do not kill more fish than you need.
- 2. Avoid disturbing the stream more than necessary. (Walking in the stream destroys plant and insect life and also leaves it in an unsettled condition for the next fellow.)
- 3. Don't crowd your fellow fisherman. (Walk around him and leave plenty of room. The first fellow at a spot should have priority.)
- 4. Do not "hog" a pool. (Take only two fish from a pool and leave some for the other fellow.)
- 5. Do not remove brush, dead limbs, stones, logs, etc. from the stream or change the contour of the flow. (This disturbs the resting places of the fish and plant and insect life.)
 - 6. Be careful with fire and matches.
- 7. Use care when releasing fish that are undersize or you do not want. (It is not necessary to wet your hands, but avoid squeezing the fish. Easy does it.) Every fish should be netted, and handling is thereby facilitated.
- 8. Do not throw paper, tin cans, glass etc. around the stream. Burn it in a safe place and be sure the fire is out before leaving. (Slim suggests that the good paper as bags, newspapers, etc., be retained for salvage. The wax paper and the soiled paper may be burned. Tin cans should have both ends cut out and flattened and brought along back, every tin can is needed for the war effort. Glass, jars and other worthless material. should be buried or stuck in under rocks or crevices.)

NYMPH FISHING-We have given some dope on what the experts say about trout fishing with streamers and wet flies, now we'll touch upon the type of angling which requires infinite amount of skill, using artificials which represent the immature stages of insect life in the water. I know an expert fly fisherman who professes that he is only learning to fish with nymphs, after two years of practice.

Trout feed on nymphs the year round. Some nymphs are found on the stream bed; a fellow the other day caught four native trout which were filled with caddis worms, and struck on a fly, while several others taken from the same waters, appearing to have been stocked this year had none in their digestive tracts, and bit on worms. He figures that these hatchery fed fish, had not accustomed themselves to foraging in the

bottom and turning up stones to get the crustaceans.

When fishing with nymphs on the bottom, the leader should be weighted. Vary the retrieve, at times drag the nymph over the bottom, although you may get fast, strike at the least sign of a bump.

Some fellows use a bi-visible fly tied a couple feet above the nymph, so it will indicate a warning of a strike.

Trout will take and spit out an artificial as quick as a wink, that is why skill and practice brings success.

When the weather gets warmer and the water temperature rises, nymphs are rising to the surface to transform into a winged

The technique of fishing should be altered. "Allow the current to carry the fly downstream, yet all the while keep working it upwards towards the surface. Trout, as a rule will follow it downstream and seize it as it is being lifted from the water.

Cast upstream, give the nymph a chance to sink, then jerk it swiftly a couple times and let it float towards you.

In fast water, the cast is made diagonally dcwnstream, and letting the line stretch out and the fly drift into quieter water.

An indication that trout are nymphing is when bulging is observed, that is when they are actively engaged snapping up the nymphs swimming near the surface, which are ready to escape from their shuck.

Another good indication of trout nymphing is when one sees streaks which follow the wake of fish swirling about and taking the pupae of midges which hang vertically at the surface. A fellow had observed this one time and had nothing along to duplicate the "green worm" which was exciting so much action. He tied a hook on his leader, wrapped a piece of wool obtained from his clothing around a few blades of grass and promptly caught trout.

"The successful artificials to use are those patterned after natural nymphs, larvae and pupae. Most of the insects found in the

water are protectively colored.

NYMPH PATTERNS—The fly book should contain imitations of midge larvae in red, yellow, and pale green; caddis worms in white, yellow and green; fresh water shrimp (often found around water cress etc.) in translucent greenish yellow; ants, both red and black; larvae of fish flies, crane flies and alder flies; nymphs of dragon flies, damsel flies, stone flies and May flics.'

Try tying your own flies and attempt to imitate the natural insect.

-Lancaster Era.

Clinton Fish Group Re-elects Officers

The Clinton County Fish and Game Association re-elected the present officers at its annual election meeting and planned a drive for 800 members for the ensuing year. Emblems of blue keystones with gold lettering will be given the members.

The officers are: Louis S. Winner, president; Charles B. Grio, Roy H. Berry and C. E. Moore, vice-presidents; J. A. Painter, secretary, and C. Q. Dietz, treasurer. The executive committee, which has John B. McCool as chairman, was empowered to revise the old constitution, after studying it.

-Harrisburg Telegraph.

THE TROUT FISHERMAN'S FIELD BOOK

Pages for a Fisherman's Entomology Can Be Clipped From This and Ensuing Copies of the Angler

Ed Leonard is a great and inveterate Pennsylvania fisherman, an entomologist and a fly tier. Upon his capable shoulders rests the task of preparing an American version of a trout stream field book, something which here-to-fore has been non-

There will regularly appear on the inside back cover of the Pennsylvania Angler, pages for such a book. The first edition is printed on the opposite page.

These pages will identify specific insects and will give the specifications of artificials to imitate them. A supplementary page for field notes will accompany the identification

In addition to these note book pages the author describes the insects in detail. This description is herewith published and in the future will be published double spacing opposite the third cover. It can be clipped from the magazine and pasted on the backs of the inserts for the field book.

The author has chosen a book of such a size, that it can be readily carried while fishing. The form is such that insertions can be made in a loose-leaf note book.

The ingenuity of anglers will probably be responsible for practical covers for binders for the leaves. Some form of cloth binding or a plastic protection such as thin sheets of lucite would be ideal. Hinged rings can be secured from any stationery supply house.

Actual fly samples can be placed right in the book. This can be accomplished by making a depression in the page by applying pressure with a flat surface seal, then inserting the insect in this spot and covering it with transparent Scotch tape.

Interesting and valuable records as to: the emergence of hatches, rises of trout, effectiveness of flies, catches, etc., can be kept neatly and in detail. It is common knowledge that there are re-occurrences year after year sometimes to the day of hatches and rises.

Such a record over a period of time would provide information which would be responsible for the most interesting and best possible fishing. It is vital to the best in dry fly fishing.

By clipping the pages for a field book from the ANGLER, the individual fisherman can amass his own data and records for the waters he fishes.

Area Sportsmen Rename Officers

At their annual election of officers in the Y. M. C. A., the members of the Tiadaghton District Sportsmen's Association returned the following to office: president, I. S. Brumgard, of Jersey Shore; vice presidents, John Allan, of Williamsport; George Durrwachter, of Cammal, and William McKinney, of Avis; secretary, Charles A. Wentzel, of Waterville; treasurer, Paul Dvorchak, of Jersey Shore; executive committee, Lewis Brooks, Dr. W. N. Shuman, Thomas Reese, of Jersey Shore; George Ohl of Woolrich, and Russell Forney, of Williamsport.—Jersey Shore Herald.

THE ANGLER'S FIELD BOOK

STONE FLY

Order: Plecoptera Scientific name: Perla Capitata Derivation of name: plecos-meaning folded pteron-meaning wing

MAY

To this order of Plecoptera belong the stone flies, yellow sallies, willow flies and creepers. These comprise an appreciable percentage of trout diet, any one of the mentioned groups being quite prolific and of such habits as to make themselves fairly available to the trout. Frequently in search of the hellgramite the Angler will uncover many of these creatures in the nymphal form but fail to recognize them.

One outstanding characteristic so far as the makeup of the stone fly is concerned is his habitation of rocky places. Seldom will the inquirer ever find a specimen in static waters since these insects are essentially rocky bottom tenants and remain in this locale until their final flight.

Their body is interesting and in some manner surprising. Two tails of stiff and springy quality are certain to be found; too, these are usually segmented clearly. The feet, of course, are equipped with two claws. The nymph has a squat and forward position, and with its powerful legs appears unusually well developed.

As was said before it is not common to find the stone fly nymph in waters other than swift, in which the rocks and broken water provide ideal conditions for the daily business of this insect. Conversely, the use of the artificials hould be associated with such waters and by means of wet fly casting in these places the Angler is certain to experience results of worthwhile character.

Perla Capitata is a beautifully marked nymph. The head and back are mottled in a blackish-brown and buff contrast which extends well into the upper legs. The body segments, as well are ringed, distinct bands of dark and buff predominating. Most every trout stream, particularly those of the eastern and northern regions, will have abundant nymphs of the Perla group. Likewise it is a comparatively simple matter to catch specimens of Perla for study or imitation.

The adult female deposits the eggs in masses which cling to crevices in rocks, etc., and some time later the nymph appears, a carnivorous, greedy creature, devouring all manner of inferior aquatic life which happens to succumb to its insatiable want. Ordinarily about one and one-quarter inches in length, the stone fly nymph will interest most any good trout; the fact that analyses prove that from fifteen to forty per cent of the aquatic life taken from trout stomachs is representative of the stone fly indicates this.

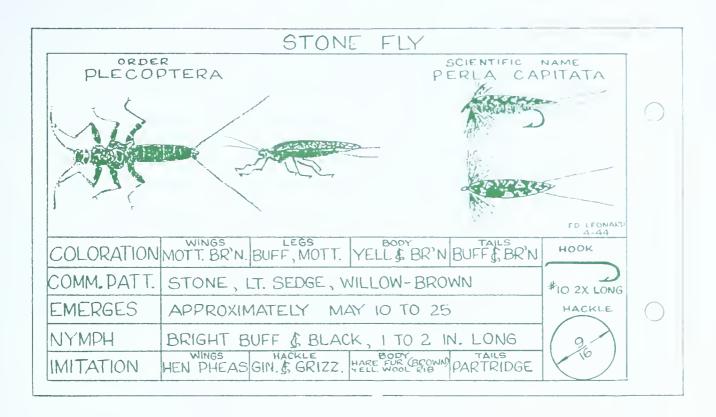
The nymph will spend a year and sometimes longer beneath the surface, then when the enigma of Nature employes its own design, the greedy underwater creature will emerge (provided a trout has not divested it of its rights) to find protection on top a rock or piece of vegetation where it will become dried from the air and sun. Forsaking its former shell, the insect is now an adult and after several attempts will attain the air in a humorous, laborious manner. Gone are the brilliant mottlings, instead a dull tone exists, usually brown, yellowish or grey-green. Another part of the transition is evident in the tail formation which has become noticeably shortened because now the creature does not require its immense power of locomotion formerly experienced in the water. In size, the adult ranges from one-half to one and one-half

When not trying to reach some distant point which must be made in several flights, the stone fly rests with its wings folded over its back, hence its alliance with the order Plecoptera. Incidentally, these wings when folded are fixed in this manner; the heavy and many veined fore wings closed over the rear ones. They extend well beyond the tip of the abdomen and will often deceive the Angler due to the appearance that the insect is larger than it really is.

The stone fly is a poor aerial subject and does not seek prolonged flights nor is it capable of such tests. Therefore, one will be certain to find these insects at rest under leaves, on logs and stumps, debris, etc.

On the average one will do well to confine his imitations to the nymphal form. Since this phase in the life cycle is so extended in comparison with the flying or adult form, it is obvious that trout become more conscious of the underwater nymph because of its regularity and meatiness.

Next time you are astream, catch a few of these specimens and examine them. Your aptitude for tieing "naturals" will become better.



STONE FLY											
	DATE	STREAM	SECTION	WATER TEMP	WEATHER	HATCH	TIME OF RISE	WATER STAGE AND CLARITY	PATTERN TAKEN	PATTERN REFUSED	RESULTS DATA REMARKS
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STONE

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STONE FLY

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EDWARD MARTIN

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Due to conditions beyond the control of the Fish Commission it has been impossible to maintain a regular publication schedule of the Pennsylvania Angler.

POST-WAR PLANS

By J. J. SULLIVAN

The world is making Post-War plans, They're figuring what to do, In every branch of industry, When the present war is through. Their plans are all mechanical, Are based on skill and science. They scheme to make a wonder world With many a new appliance. They dream of Super Autos, And aircraft that will fly Without an expert's guiding hand To keep them in the sky. By new and streamlined methods The universe they'll run, And they'll design the gadgets With which the work is done. They plan to save a lot of time And give to folks more leisure, They'll nullify the curse of toil And make each task a pleasure. I'm sure their plans will gratify Most every human wish, But my post war plans are simple, I'm going to hunt and fish.

Old nature will not change the style, Of the everlasting hills. The forest will look much the same, And larks and whippoorwills Will make the same sweet music Without a change of note. Each denizen of woodland trails Will wear his pre-war coat, The trout and bass in lake and stream Will still retain old habits, And we will find the self same rule Applies to deer or rabbits. And so, considering these facts With no wish to affront The post war plans of super minds, I plan to fish and hunt.

Courtesy of Remington Arms Co., Inc.

SOIL AND FORESTS ESSENTIAL FOR PENNSYLVANIA PROSPERITY

By MAJOR GENERAL EDWARD MARTIN Governor of Pennsylvania

(Address at the 58th Annual Meeting of The Pennsylvania Forestry Association)

Mr. Chairman and Fellow Americans:

Pennsylvania is one of the richest political sub-divisions in the world in natural resources. We have coal, oil, gas, iron ore, slate, sand, gravel, clay and a great acreage of rich soils. Two hundred years ago we had the finest forests in the world. Those magnificent woodlands are gone. Much of our ore, coal, gas and oil have been used in building this great country. We are using more and more of these natural resources today in fighting for our liberties and our lives.

Rich soils, slowly made by nature through the centuries, have also been worn and wasted. When the White Man came, the average depth of this soil carpet in Pennsylvania was nine inches. That rich, productive earth has now been wasted, eroded and washed away until its average depth is only six inches. That six inches of rich earth is all that separates us now from famine and want.

Conservation of natural resources, of these raw materials of civilization, is a proper concern of government. Soil is of the first importance. Next comes the conservation of our forests. It is vital that we consider the conservation of these and other basic natural resources in the post-war years.

Lumber is now a critical war item. The mills cannot cut enough timber. War demands are insatiable. For home builders, farm users, business and industry it is harder to get lumber than it is steel. Man can destroy a tree in a few minutes but it takes God a century to make one. When the resources are gone, man must go. Pennsylvania has many "ghost towns" in areas where the natural resources have gone. "Pit Hole" of the early oil days is a memory. Scioto, where Carnegie made his first million, is gone. The thriving lumber villages, dotted all over the Commonwealth in the great days of that rich industry have vanished. Deserted, windowless and decaying homes, churches and schoolhouses mark the areas of once prosperous coal operations.

Forestry has had a long history in Pennsylvania. The farsighted William Penn knew its value and significance. Had his ideas been carried out, Pennsylvania would still be noted for its timber. As early as 1681, Penn, in his Charter of Rights, provided that in clearing the land care should be taken to leave an acre of trees for every five acres cleared. Two generations ago the wood lot was regarded as a necessity in the life of every rural village or small town family. Long ago far too many farms sacrificed their woodlands.

Many of the early achivements in Pennsylvania forestry can be traced to the late Dr. Joseph T. Rothrock, affectionately known

as the "Father of Pennsylvania Forestry." He was active in organizing the Pennsylvania Forestry Association in 1886; the oldest State Forestry Association now active in the Nation. He was largely instrumental in having Governor Beaver appoint a Commission of Forestry in 1888, the first of its kind in Pennsylvania. Seven years later, in 1895, Governor Hastings signed a bill which set up a Division of Forestry in the Department of Agriculture. In 1901, the Division of Forestry became the Department of Forestry and Dr. Rothrock was named as its first Commissioner. He served in that capacity until June 1, 1904.

The present Department of Forests and Waters was created under the Administrative Code of 1923, which combined the previous Department of Forestry and the Water Supply Commission. It continues to operate under the Administrative Code.

Year by year forest lands have been coming back under the control of the Commonwealth. The first State Forest land purchase was made in 1898, consisting of 17,010 acres in Pike, Lycoming and Clinton Counties. Today the State Forests comprise a total of 1,654,762 acres located in thirtynine counties of the State. Our mountain counties, as is natural, have the greater acreage of these woodlands. Potter has 251,427; Clinton, 231,448; Lycoming, 151,997; Centre, 122,945; and Cameron, 119,038 acres. Tioga is in the hundred thousand acres class with 100,174 acres.

In addition to these State Forests, the Game Commission owns 742,362 acres located in 62 counties. Elk with 46,673; Sullivan with 45,247; Lycoming with 36,785; Bedford with 36,662; Bradford with 36,534 and Centre with 34,107 acres are at the top of the list.

The grand total of 2,397,124 acres makes an impressive body of state-owned land that is mostly woodland. This is a wartime as well as a peacetime asset.

Penn's woods have always made a great and a valuable contribution to the wars of this Nation. The forgotten charcoal furnaces scattered over Pennsylvania supplied iron for the guns of Washington in the Revolution and for the weapons of the North in the War between the States. Today some of these old charcoal furnaces are included in State Forest areas. They are again making a valuable contribution in supplying timber for the Nation's War Program.

Out of our State Forests come decking for battleships, aircraft carriers, mine sweepers and patrol boats. Our pulpwood is going into smokeless powder; rayon for parachutes; plastic for aircraft parts; paper for shell casings and containers for blood plasma, food and ammunition. Few people realize the vast use of wood by the Navy and Army. Perry's historic Erie Fleet was made almost entirely of wood. It was the day of wooden ships. In fact, until the fight between the Monitor and Merrimac during the Civil War all ships were wooden ships. That battle made every wooden warship in the world obsolete.

But today wood is used even on battle-ships for many things, including 300,000 feet of wooden decking, and for the packing case filled with vaccine tubes. The Army and Navy list 1,200 items made from wood. The Navy is using more wood now than ever before in its history. Every big ship has a woodworking shop and a staff of carpenters. The tonnage of wood in 1942 for the Army and Navy was bigger than the tonnage of steel.

Our State Forests play still another part in war. They are valuable for purposes of training and maneuver. A United States Cavalry squadron, 497 men and 442 horses, bivouacked for nine days in the Susquehannock State Forest in Potter County where it conducted maneuvers for squads, platoons and troops. The 99th Field Artillery, Battalion Pack, of the Edgewood Arsenal in Maryland, occasionally uses the Mont Alto State Forest in Franklin County for maneuvering. The 75mm Howitzer Gun Batteries are carried on pack mules, each gun broken down into six units, requiring six mules to carry each howitzer.

Modern maneuvering must be done under some kind of cover. There are eyes in the sky. Forests are the best areas for troops to bivouac out of sight of the air forces.

There is much timber on and near the famous Indiantown Gap Military Reservation. This has helped make it one of the finest training centers in America. Already during this war the 28th, 29th, 44th, 37th, 77th and 95th Infantry Divisions and the 3rd and 5th Armored Divisions and the Port Battalions have trained at Indiantown.

The Pennsylvania Military Department, the Game Commission and the City of Harrisburg together own almost 70,000 acres in the Gap area. This includes artificial lakes, second growth forest, cleared land and streams. After the war it can be used, not only as a military training center, but also as a recreation area and a timber reserve.

What the Forestry Department could do in this national emergency it has done. Our forest fire observation towers have been made available to United States Aircraft Warning Service. Many of the personnel have been of great value as volunteers in war work. Their special knowledge has been very useful and valuable.

A carefully planned State Forest program (Continued on page 15)

THEY ALL FISHED

By SPARSE GRAY HACKLE

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USED to think that anglers fished for the sake of fishing. But as I look back at my angling companions, I realize that their fishing was really an escape from conditions which repressed them. In other words, they fished to express themselves.

In the days when girls were "flappers," expressing one's self usually meant raising Cain in a polite way, but both the act and the phrase are largely forgotten now. Nevertheless it is true that people still express through some congenial activity a side of their nature which is repressed in their daily life.

I have selected a number of my old fishing companions because of the vigor of their self-expression. Doubtless you will identify among them the counterparts of your own friends, or even of yourself.

There was for instance, The Speed Demon; he fished to express a passion for fast driving, and no trip interested him unless it went to the Back of Beyond. He loved to drive two or three hundred miles to try out a new stream, and if it turned out to be fishless he didn't care.

The Demon was a hellion in traffic and a tornado on the road. He always drove with one eye on the rear-view mirror and he had an uncanny ability to sense the presence of motorcycle policemen and patrol cars. He was a living encyclopedia of up-to-theminute information on police traps and antispeed campaigns in a hundred towns, and a walking atlas of short-cuts and back roads to get around them.

He got away from every standing start with a neck-snapping take-off and he had a nerve-racking way of shifting into second instead of braking as he roared into a turn, and then screaming out of it at sixty before shifting gears again. It sounded like a divebomber machine-gunning a fire engine.

The Demon fished as he drove. Nerves afire with the tempo of seventy-miles-an-hour, he would race along the stream, false-casting so rapidly that his rod was a blur. He covered miles of water, and always wanted to go somewhere else.

Poor Speed Demon! One day he met another fellow who was driving the same way he was!

Then there was the Born Mechanic. He was one of those incredible persons to whom the mysteries of mechanical things are clear as print. He fished as an outlet for his inventive genius and manual skill.

He was a New England Yankee, not a big man, but with such huge hands that he appeared to be wearing baseball gloves. Nevertheless, he could tie a beautiful No. 22 Fanwing Royal Coachman, and detect by touch a variation of a thousandth of an inch. He did the most equisite work with tools that I have ever seen.

The Born Mechanic was a toolmaker and die-sinker, a sort of king among machinists. He lived in a strange, magnified world where precision is a god and where "a tenth" is universally assumed to mean not a tenth of

an inch but a ten-thousandth of an inch. Accuracy was the breath of his nostrils and mathematics his life's blood.

Fishing was nothing to him; tackle was everything. A rising fish was merely an annoyance which interrupted his experimental casting to observe the action of a middle rod-joint. A rapid stretch full of fish was merely an opportunity to try out some new anti-slip footgear.

He was an animate mass of beautifully made gadgets. He must have invented and made twenty collapsible landing nets, a dozen kinds of non-slipping footgear, and scores of boxes, cases, containers and bags for carrying flies, leaders, fly oil, line grease and tackle. Significantly, he never bothered to originate anything for carrying fish. He made a machine for dipping rods in varnish, another for putting on silk windings, and a third for polishing lines.

His downfall was rodmaking. He worked for years to calculate mathematically the tapers which would produce the perfect fly rod, making and rejecting one experimental model after another. He never found his ideal, but in the process he learned how to make such darn good rods that people insisted on buying them, and now he spends all his time helping others to fish instead of doing it himself.

His opposite was City Boy, who probably had the most uninquiring mind and the least mechanical comprehension of any man I ever knew. Fishing was sport to him, but I am convinced that he really did it because it was the Correct Thing.

City Boy might wear old clothes, but they had to be fishing clothes, and if he wore old ones it was simply because he had seen a correct fisherman wearing similar ones. A necktie, a shave and a clean shirt meant more to him than the extra hour of sleep that they cost when he went fishing in the early morning, and he preferred sweltering in a correct fishing coat to the hot weather comfort of unconventional shirt sleeves. He belonged to a correct club and never fished any but correct streams, sanctioned by the great fishing writers. All his tackle was from correct makers, usually English, and he fished correctly, as the books directed.

But he was only a City Boy, and he had a city boy's failings. One was for light He was a great walker, like most shoes. city folks—it's your suburbanite who gets the car out for every little errand. But he was used to pavements, and he wouldn't tolerate any shoe heavier than a street shoe, even though the stream-bed stones left him sorefooted every day. Another failing was for newspapers-meaning, of course, New York newspapers. He seemed to think that the world would go to pieces if he didn't keep track of it. We went to the Adirondacks for three weeks, once, and he spent two of them walking to the village for newspapers.

City Boy married a correct girl who put a stop to his fishing and I don't see him anymore, but I have a swell mental picture to remember him by. I am standing by an abandoned, overgrown logging trail, fifty miles from a highway. City Boy is coming through the woods toward me. As he reaches the road he automatically stops and looks both ways for traffic!

I used to laugh at City Boy, but you could only laugh with the Good Mixer. Most people called the Good Mixer an ardent angler and kidded him about his devotion to the sport, but he really fished to express his need for companionship.

He fished for over forty years but never alone—the idea would have made him shudder. He stuck to the old standbys—the Upper Beaverkill and Willowemoc, the Ausable, the Brodhead—where he could be sure of meeting old acquaintances and a host of new anglers with whom he could make friends. He would proffer cigarettes, killing patterns, fly dope, a drink, a sandwich or a hot tip at the drop of a hat, not so much because he was generous as that he wanted company so badly he was willing to pay for it

Good Mixer shone where the fishermen were gathered. His voice was the loudest, his laugh the jolliest, his backslap the heaviest and his lies the most unbelievable. He loved to organize fishing parties; at the hotel he projected the all-night poker sessions, mixed the highballs and laughed so heartily at his own jokes that you joined in until your sides were sore. He was the Life of the Party.

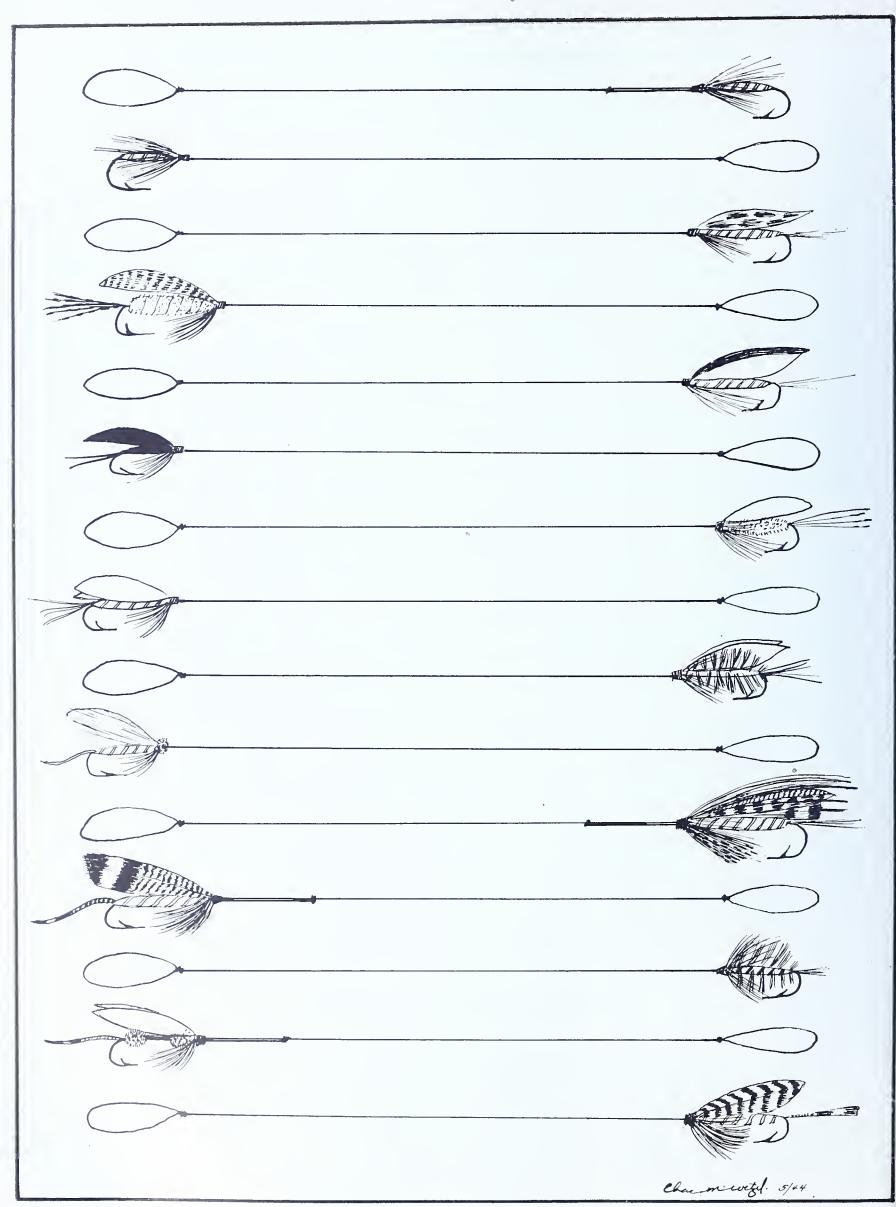
I once found him marooned, solitary and forlorn, at a fishing club and took him to Wolf Pond for a couple of days' fishing and camping. I left him for half an hour to try for a rising fish and when I returned he had materialized four hikers out of the deepwoods and was cooking pancakes for them while they sat on the deacon bench and laughed at his jokes. I have always had the private conviction that he got so lonely he moulded them out of clay and breathed the breath of life into them out of his own inexhaustible store of vitality.

In contrast to him was The Woods Runner. He was a throw-back to our pioneer ancestors and fished to convince himself that he could survive in a single-handed struggle against the forces of nature.

I met The Woods Runner in the National Guard field artillery, which he had joined to learn about horses and packing. He had served for years in the infantry, the signal corps and the naval reserves, transferring from one to another when he had learned all that would help him in living in the wilds. He was a good small-boat sailor, a wizard at semaphore signalling, a good hand with horses and a potent shot with the long or the short arm. He could trap, cast the fly, stalk animals and find his way through any country.

When he worked, he clerked in sporting goods stores and caught rattlesnakes for zoos

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AMERICAN PROGRESS IN FLY FISHING

By CHARLES M. WETZEL

PART I

LY fishing equipment has been brought to a high degree of perfection in the last century. For some of this we are indebted to England, but the great strides made by the American people have perhaps surpassed any other country. When we consider the implements used by our forefathers in the early days, and then compare them with the modern equipment now in use, one can visualize the great strides taken.

Prior to 1833, nothing of any importance had been written on the subject of fly fishing in America. What information the early settlers had on the subject, was undoubtedly secured from former emigrants who pursued the sport in the old country, or from old English fishing books. Among the latter, one could undoubtedly find, Izaak Walton's "Compleat Angler"; Bowlker's "Art of Angling"; Carol's "Anglers Vade Mecum"; Brookes's "Art of Angling"; Richard Franck's "Northern Memoirs"; Barker's "Art of Angling" and "Barkers Delight"; Sir H. Davy's "Salmonia"; Bainbridge's "Fly Fishers Guide", and no doubt many more of still older origin.

The explanation for Americas inactivity in failing to produce any angling literature up to this time, can be attributed to the fact, that fishing was pursued not as a matter of sport, but rather as a means of a livelihood. In carving their homes out of the wilderness, the early settlers had little time to dig into the mysteries of fly fishing, especially when it was so easy to eatch all the fish they wanted to in a very short period of time, by using bait.

But after the turn of the nineteenth century, a new era was developing in the country. Pressure of work was lightening up; more time was had for sports and the better things of life, and it was not surprising, when in 1833, Jerome V. C. Smith, a medical doctor from Boston, came out with, "Natural History of the Fishes of Massachusetts, Embracing a Practical Essay on Angling". Smith's book went through but two editions. It is now very rare and commands a good price in the old book markets mainly because it was the first book published in the United States that dealt with anything relating to the practical side of fishing. Suppose I quote certain paragraphs from the book which will give you an idea of the fly fishing equipment employed in those days:

"A pocket book, not only well supplied with artificial flies, but with such materials, particularly feathers, as enable him to repair his losses, and imitate nature upon the spot, is an important article of the fly fisher's equipment; his rod however deserves the first consideration. The wood is hickory; it is twelve and a half feet long; it has but three joints, which are ferruled only on one end for the sake of lightness; the butt is solid, very large in the hand, and tapers very suddenly; into the end of it, a spike of five inches of length, thin like a knife, is made to serew, for the purpose of supporting the rod upright in the ground, as this is a position in which it is least exposed to

danger; the length of the spike is required to give it firmness in the ground in which it is thrust, which is often of a sandy or mossy nature-finally when put together, it weighs but thirteen or fourteen ounces without the spike and may be held all day at the extremity, or, as some prefer, above the winch, without the least fatigue, and is under as much command as a coach whip". So much for the rod. Now suppose we check on the reel, line, leader and flies.

"A reel or winch is indispensable; it should be such as is called multiplying, with which advantage is taken in exhausting the fish, by winding up the line with greater rapidity, whenever it becomes relaxed.' line next follows.

"The line should be about thirty yards long, and made of patent silk and hair, either of a green or gray color. A line made of hair, or silk and hair wove together is preferred, (indeed no fly fisher ever uses any other) on account of its not becoming heavy and saturated with water, like lines of silk and other materials, which cling to the rod when wet and swelled, fall with violence when the fly is cast, and are not delivered

freely through the rings of the rod." Now suppose we investigate the leader.

"Smaller lines, made of that indispensable material, gut, are also necessary; these are called 'casting lines' and sometimes 'footlengths,' and are attached, as occasion may require, to the principal line, for the purpose of falling with less violence upon the water.' The flies next follow:

"Two flies are generally used, termed technically, a dropper and a stretcher, the latter being at the extremity of the line, and both made to remove at pleasure, by a simple arrangement of the casting line. When three flies are used, there can be no better arrangement for them than the following. The first drop fly, to be thirty inches from the stretcher, the gut only four inches long and of the stoutest kind. The second drop fly to be thirty five inches from the first, and the gut eight inches long. The advantage of observing this fixed distance between the flies, is that of their all three coming in contact with the water in the ordinary position of the line after it is cast.

"Highly as we appreciate it as a pleasing resource to the angler, and forming one object for the exercise of his skill, it is not intended to add to these remarks our own experience in the art of fly making; it will however be proper to state the names of those mentioned in the books on anglingwhere ample directions may be seen-of such as are said, and we have proved to be, standard flies, that is such as are to be found to be good at all times and in all places. They are the palmer flies, namely, the red hackle, yellow hackle, grouse hackle, etc.: and wing flies such as the green drake or mayfly, the march brown, and indeed any and all of that class of insects known by the name of Phryganeae and Ephemerae, to which may be added the grasshopper as well as beetles, for 'there is hardly any insect that flies, including the wasp, the hornet

the bee and the butterfly, that does not become at sometime, the prey of fishes'.

From the above, it will be seen that very little original material appeared on the subject of flies-all of them being patterned after English or Scotch specimens, and it is unnecessary to add that the method of fishing was exclusively with the wet fly.

As we have noted before, fly fishers were few and far between, but with the advent of Smith's work, the sport was beginning to take hold. From now on followed a steady period of progress, both in equipment and angling literature, which has not yet reached its culmination—perhaps it never will.

After a lapse of twelve years, John J. Brown, a New York tackle dealer, eame out with "The American Anglers Guide." This occurred in the year 1845 and it was written

under the pen name of "American Angler."

Brown states that, "from the fact of there being comparatively few who practice with the fly, some English writers are of the opinion that there are no fly fishers in America, and many of our countrymen think there are very few, but this is a great mistake. There are hundreds of good fly anglers, and many that can throw a fly with the most experienced of Europe.'

Brown draws heavily on various English works, such as Blaine, Daniel, Fisher, Walton, Cotton, and Hofland's "British Anglers Manual." Of the original material, the following is quoted, as it represents the American

practice prevalent in those days.

"Fly fishing is usually practised with a short one handed rod from ten to twelve feet in length, or a two handed rod from fifteen to eighteen feet in length. The first mentioned is the most common in use, and is calculated for the majority of our streams, which are small and require but little length of rod or line. Attached to the rod should be a reel containing from thirty to fifty yards of hair, grass, silk, or silk and hair linethe latter description should be used if it can be procured, tapering from the tenth of an inch almost to a point; to this should be attached a leader, of from one to two yards in length; and finally your fly, on a light length of gut; if you wish to use two or three flies, place them on your leader with short gut about twenty four inches apart." Here we find the leader so called for the first time; up to this date, and for quite some while later, you will notice that it is known under a variety of names, such as casting lines, footlengths, bottom line, etc.

In an earlier part of the book, Brown states that: "the rods used for trout are from 12 to 16 feet in length; the butt of maple, the second and third joints of ash or lancewood. and the last joint or top, of lancewood for bait; if for fly fishing, of spliced lancewood, bamboo and whalebone, similar to the salmon rod; in fact a trout rod may be called a small salmon rod, and is very often used for the same purpose. The walking cane rod, if well made, is also a very useful article for traveling, or where the angler does not wish his business or profession

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BAITS FOR STREAM FISHING

By W. R. WALTON

"In Maye take ye stone flye and the bobbe under the cowe torde, and the sylk worme; and the baute that breduth on a fern leaf." Juliana Berners (1496)

MENTION of bait fishing in streams is likely to bring to the mind's eye of most anglers principally the images of the bait-fishes, including the stone-cat, and angle worms. To be sure, these old reliables always will remain in the van-guard as effective baits for this branch of our favorite and incomparable sport of sports. Their popularity is easily understood because not only are they widely effective but also readily procurable during nearly all of the fishing season. However, there exist many other excellent baits that are not so generally known or used and which, in their seasons, are quite as effective as, or even more so than, the bait fishes or the celebrated, if badly hackneyed, garden hackle.

It is of several of these lesser known baits that I now propose to gabble somewhat at length. Since much of the matter herein embodied, is the result of personal observation and experience, perhaps the reader will forgive the rather free exhibition of what has been pithily termed the "perpendicular pronoun.'

Although chronically addicted to fly casting and, as may be suspected from matter scattered through the issues of this publication, to fly tying and light lure making, I do not hesitate, where legally permissible, to revert to bait fishing when artificials fail to bring results. That such action is in any respect reprehensible I firmly deny. On the other hand I willingly agree that it becomes necessary and desirable to prohibit the use of all but artificials in certain waters where the trout population is artificially maintained at considerable public expense. Otherwise trout fishing would soon become a lost art in heavily fished areas in which abundant annual stocking with legal size fish must be resorted to. Such synthetic trouting is about all we can hope to maintain under present day conditions of rapid transportation and increasing suburban populations. Be it said however, that there are certain phases of bait fishing for the game fishes that require not only as much skill and knowledge of stream craft as does fly fishing in its strictest sense.

In retrospect of many years of fishing freshwater streams I visualize numerous instances where after hours of fishless effort with artificials of many shapes and hues, resort to baits of native waters has brought success when the day seemed irretrievably lost. The possession of a practical knowledge of insects and the commoner acquatic animals adds a zest to angling in streams which can not be supplied by mere enthusiasm for the sport. Many experienced anglers have gained such knowledge through natural powers of observation and although they may not know the scientific names of these essential bait creatures, they have learned where, when and how to look for them.

On trout streams those queer but highly

important insect inhabitants called caddice worms are known to most anglers. These are of so many different kinds and assume so many different forms that at least some of them are certain to be noticed by ordinarily observant anglers. These insects are among the most desirable of all streamborn trout food because most caddice worms are vegetarians and thus serve to transform the plant life of the sreams into nutritious fish food. That caddice worms and adult flies formed 30 percent of all food taken by the Eastern brook trout is the observation of Dr. Paul Needham of the U.S. Fish and Wild Life service.

This as compared with 17.6 percent of Mayflies will suprise some anglers who are prone to consider the Mayflies as of greater importance than the caddice flies. Probably this impression has been gained in fishing for the brown trout which Dr. Needham found to consume no less than 79.3 percent of Mayflies in its insect diet. However, of this percentage only a very small portion consisted of adult flies, the greater proportion being nymphs probably on their way to the surface. Most of the larger Mayfly nymphs are of burrowing habit and thus are not accessible to the trout save during their annual or biennial periods of emergence. On the other hand most of the larger caddice worms are free-living forms such as those shown in figures 1, 2 and 3. Many of these species are over an inch in length when full grown and thus make a juicy morsel. These large kinds and their relatives are known to many anglers as "stick bait" and can be used with fatal effect for that purpose. They have the habit of attaching to the outsides of their silken cases bits of twigs, bark and leaves, and therefore look much like animated twigs. During periods of low water they sometimes may be seen in vast numbers crawling over the bottoms of rocky pools. At such times, and with such a plethora of juicy food available, it is little wonder that the trout may then refuse to accept the angler's artificials. The fish ordinarily swallow the caddice worms case and all as these cases disintegrate in their stomachs and apparently merely furnish beneficial roughage. However, when placed on the hook in a naked state caddice worms usually are accepted eagerly as old and valued acquaintances. When fishing with them in this way the fish ordinarily should be granted slack line as otherwise the bait is likely to be stripped without result.

It may be not widely known that some species of caddice worms make no case and that these kinds usually are green in color. Others live beneath stones sometimes in little net-screened dens but these are too small in size to be of interest to the bait fisherman. Strange to say, many of these larger kinds of caddice worms remain unnamed by science because they have not been identified with their adult forms and much remains

to be learned about their natural histories. The Mayflies, dragonflies, and stoneflies are much better known, and fine monographs on them are available, but the literature of the American caddice worms is of a fragmentary and scattered character and relates mostly to adult forms.

Among the comparatively little used baits for trout, small crayfish are often very effective and not infrequently form an important item in the diet of the trout. Fish taken from streams abundant in these crustaceans are likely to exhibit flesh of a bright pink or salmon color and to be of superior flavor. In baiting with crayfishes some experienced anglers use only the tails. These may be used in their natural condition or with the shell peeled from them.

Among unusual baits for trout are certain parts of the fishes own body such as the highly colored pectoral fin. This is used as a substitute for a fly and fished in much the same way as the wet flies. In fact the Parmachene Belle artificial, so effective in northern latitudes, is said to imitate this fin. My own experience with this fin in local waters has been quite disappointing but this may be due to the lack of brilliance in color of our local trout which are almost exclusively stocked fish of recent liberations. Less well known is the European poacher's trick of plucking out the eyes of captured trout for use as bait. Personal experimentation with these trout eyes has shown that they have a great fascination for the trout and were eagerly taken. Just what causes this strange reaction is rather hard to understand.

In any event, the whole idea is repugnant and is only mentioned as a curiosity in trout behavior. However, it does not seem much more distasteful than the rather common use of salmon eggs for bait, which is a common custom in streams west of the Rockies, or in those mountains.

Since the advent of the Japanese beetle many reports of success in fishing with it have been noted. Apparently it is most readily taken by the brown trout which as well known is a persistent surface feeder. This beetle like many others of land origin floats buoyantly on the surface when it drops into the water. Its brilliant coloring should make it attractive under these conditions.

When it comes to fishing for the wily and temperamental bass of the streams, which oft-times spurn all artificials, the proper presentation of certain favorite baits such as the helgrammite, crayfish or "crab," or even the young of the lamprey eel or "lamper," has laid low many a fine bronzeback.

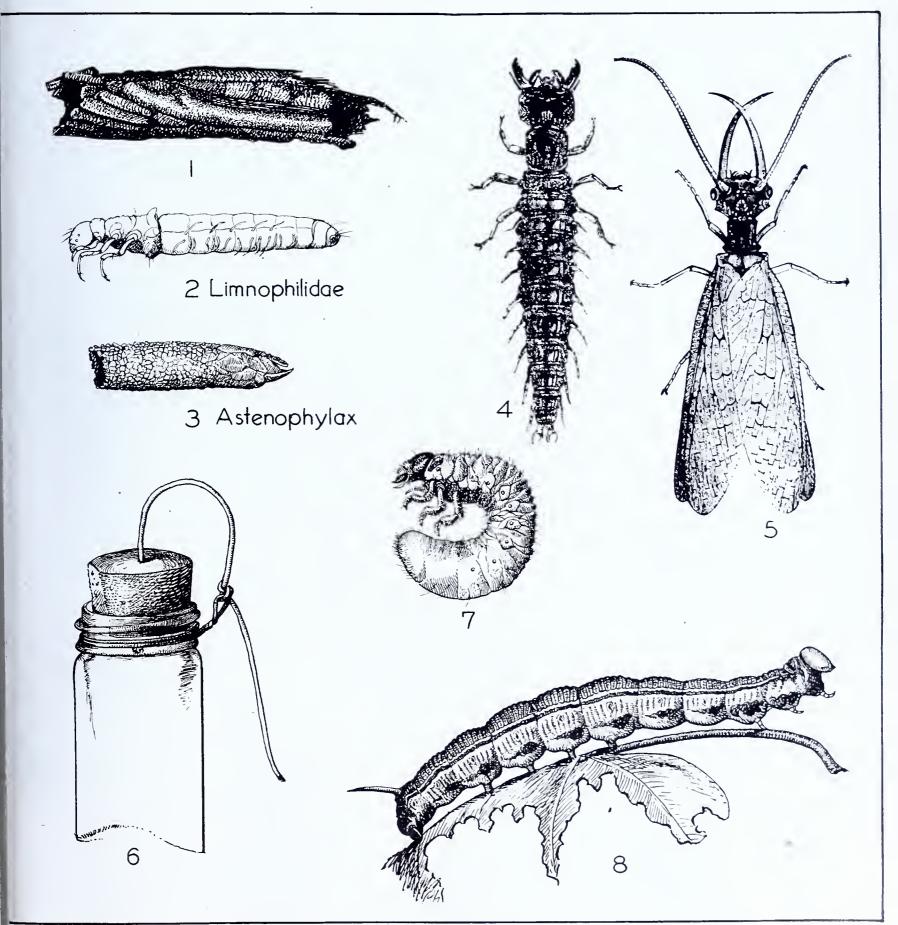
The helgrammite, figure 4, whose three year sojourn in the rushing waters renders him a natural for the bass and other game fishes is perhaps the first choice among insect baits for denizens of the streams.

Quite recently I have noticed the Fishing Editor of a well known sporting journal telling his readers that the helgrammite "is the young of the dragon fly." This is not the first time such statements have been made and as there seems to be considerable misapprehension regarding the natural history of this insect the following information taken from authentic sources, may be found of interest.

The helgrammite, scientifically, Corydalis cornuta Lin., with the exception of the giant waterbugs, is the largest of North American aquatic insects, and by all odds the most carefully studied species. Its transforma-

tions and life history were described, in 1848, by S. S. Haldeman, and its anatomy was afterward studied in great detail by Dr. J. H. Comstock and his students at Cornell University. It belongs to the entomological family Sialidae and is only distantly related to the dragon flies. The adult of the helgrammite is illustrated in figure 4 which depicts the male insect. This fly is a rather clumsy slow-flying creature that is seldom seen as it flies at night and is only occasionally attracted to artificial lights. Its body is soft and flabby and it is entirely defenseless in spite of the enormous jaws so evident in the illustration, figure 5.

The eggs of the helgrammite are deposited in masses of 2 to 3 thousands on trees, rocks, bridges or other locations overhanging the water into which the young drop upon hatching. These egg masses resemble splashes of whitewash and may easily be mistaken for bird droppings or the eggs of water spiders. It takes nearly 3 years for the helgrammite larva to attain its full growth but as a brood matures each year, the inect may be found present in many sizes under or on the rocks of a given stream. Since the insect is a carnivorous creature subsisting on its other aquatic neighbors in-(Continued on page 13)



FISH FOR TROUT FOR FUN-NOT FOR FOOD

By ALBERT S. HAZZARD, Director

Institute for Fisheries Research, Michigan Conservation Department

(Reprinted from Michigan Conservation Department)

Facts upon which this article is based are largely from published and unpublished reports of Dr. David S. Shetter, now Biologist in Charge of the Hunt Creek Fisheries Experiment Station. Louis Krumholz supervised the collection and compilation of most of the creel census data on small "made" trout lakes.

DURING recent years Michigan trout fishermen have debated the present daily limit of "15 trout but not more than 10 pounds and 1 fish" and most seem to agree that it is too high. The question might be raised as to just what is a satisfactory number to be set by the Legislature since it is that body not the Conservation Department, which specifies the limits on fish catches except on two lakes (Lake Charlevoix and Birch Lake, Cass County) where by Commission order five trout make up the daily bag.

All are agreed on certain principles. The limit should be as generous as the annual production of fish will permit. It should be fair to all anglers and should not favor a few who are lucky enough and hungry enough to take the maximum allowed by the law if at the expense of the rest. The limit should also be attainable—not every day of course, but on at least a few good days during the season by a reasonably skillful angler. Does our present limit qualify in these respects?

There was no limit to the take in the "good old days" in Michigan, which was proper as the supply was more than adequate for the few who fished. Late in the 19th century a limit of fifty was imposed, which was reduced to thirty-five and then twenty-five and finally fifteen. These later reductions came with increased angling, particularly with the advent of the automobile and good roads.

Other states have been faced with the same problem, even those in the far West and in northern New England. In the wilder places in both of these sections the angling pressure is less than in Michigan. Montana has recently reduced the daily take to 15 game fish including trout. Wyoming permits 20 game fish per day, Colorado 20 trout, Maine 25, Vermont 20, New York and Pennsylvania 10. Our neighboring states of Wisconsin, Minnesota and Indiana allow 15 trout for the day's catch. In Ohio and Illinois, where trout water is scarce, the limit is 6 and 8 respectively. In most of these states, as in Michigan, there is also a maximum daily poundage regardless of number and in some, fishing is restricted to the use of artificial flies and to even lower catches on certain waters. The trend in all progressive trout states has been toward lower daily limits, thereby placing the emphasis on the sport value rather than the meat value of trout.

Michigan's average trout season is approximately 130 days. It would be theoretically possible for an angler legally to take 1,950 trout in the course of the season. No one ever approaches that figure although records of three and even four hundred trout per season have been reported. The local expert who can watch conditions of

weather and water and who is able to go when these are right and who knows the streams is the one who makes the "killings." In normal times the average trout fisherman is lucky if he can spend a week or two in the North and can make four or five weekend trips otherwise during the season. Naturally he cannot expect to strike conditions right each time and his take is relatively small, but multiply it by several hundred thousand and the total catch is significant.

"Wild" Trout in Streams

It has often been stated that most of our trout waters were overfished prior to the war and that this was a factor making for unsatisfactory fishing. Creel census studies show that the angling pressure on trout streams was approximately four times as heavy as on bass and bluegill lakes. Whether the removal of trout by anglers during the first part of the season from our better trout streams affects the later catch is open to question. Complete catch records for several seasons were secured from sections of a number of streams including the Pine and Little Manistee Rivers in Lake County, the North Branch of the Au Sable near Lovells, and the East Branch of the Tahquamenon in the Upper Peninsula. In none of these was there any marked decline in the catch of trout as the season progressed; in fact the catch per hour was actually better in June than in May for most waters and showed no decline even in late August on heavily fished streams. It is true that legal-sized plantings are soon caught out and only temporarily boost the catch per hour, but the natural production, which is the mainstay of the angler in our principal streams at least, seems to maintain trout fishing on a pretty even keel throughout the summer.

What about southern Michigan trout streams such as Dowagiac River, Spring Creek, Paw Paw River, Rice Creek and the smaller streams which remain cold enough for trout in summer and therefore deserve to be classed as trout waters? The Department has no complete creel census data for these streams but presumably they are fished more heavily than those farther north and their natural productivity is lower because of extensive drainage of many spring tributaries which are the natural breeding and nursery areas for trout. Research is demonstrating that if the headwaters and springfed tributaries can be preserved, nature can be expected to take care of the stocking of our trout streams pretty well. Enough mature trout escape the fishermen to produce all the young trout (and perhaps more than enough in some waters) these streams can grow to maturity. Of course if the majority of anglers are not satisfied with the normal vield of our trout waters, legal-sized trout

from hatcheries can be added up to the limit they are willing to pay and fishing can be artificially stimulated for a week or so after each planting.

In so far as trout streams are concerned, there is no evidence that they were being overfished prior to the war or at present. Where we have reliable data on northern streams it would seem that in spite of the heavy pressure the trout catch holds up well throughout the season. There is no valid argument for a lower limit in these findings.

Trout Lakes Are Different

The facts from trout lakes—especially small "made" trout lakes (2 to 25 acres), where fishing is maintained largely or entirely by hatchery plantings since natural spawning conditions for trout are lacking, are quite different. Catch records from lakes planted with marked trout show that from 80 to 94 per cent of the survivors of previous fall plantings of legal-sized fish are caught out on opening day, leaving little for angling the rest of the season. On larger lakes trout are not taken out so rapidly.

The need for a lower limit on such waters is self evident. Obviously the trout stock is endangered by such fishing and a relatively few people get the bulk of the plantings.

The release of legal-sized trout in streams also makes the present limit so easily obtainable by a few fishermen who happen to be there shortly after a planting has been made and when conditions are right for feeding. Limits are taken in a few hours even by "dubs" who have never caught trout before in their lives. If the number of legal-sized plantings in streams and small lakes is to be increased, a lower limit is necessary in order to make these plantings yield the maximum amount of sport.

Creel Census on Streams

Creel census figures for some of the best trout streams in the state taken during the four years before Pearl Harbor show that very few trout fishermen reached the present limit even when heavy plantings of hatchery trout were made during the season. Data from such streams showed that from 41 to 79 per cent caught no trout on an average day; from 1.2 to 5 per cent took 5 trout; from 0 to 0.7 per cent 10 trout, and 0 to 0.2 took the limit of 15. If "par" in trout fishing is the limit, we can see why some trout fishermen complain that fishing is poor.

The story on "made" trout lakes is quite different. Eighteen of 32 anglers fishing Kimes Lake, Newaygo County, took the limit the first day of the season in 1942. One man had 15 before 7 o'clock, came in and got his wife and left with 30 trout within

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LIGHT LURES VS. THE HEAVY WEIGHTS

By Charles K. Fox

WITHIN the last fifteen years many: light lures, light weight lines, longer and lighter rods, and reels with light spools have been manufactured and sold. There are three reasons for this and all are good. The light weight lures, are most effective. Light balanced equipment is nicer to cast. The playing of fish on light tackle makes for an improved sport over the old block and tackle tactics.

By light lures we mean anything ½ oz. or less in weight, with special emphasis on those weighing % and ¼ ounces. Many now consider a ½ oz. lure a heavy one, whereas, in the old days that was as light as they came. The small: plug, casting spoon and weighted bucktail and spinner requires light tackle properly balanced for effective handling. The line should be 12 lb. test or less, the rod from $5\frac{1}{2}$ to $6\frac{1}{4}$ feet in length and the reel should have an aluminum spool and cork arbor.

The light line offers a great deal less air resistance than the bull rope type. A light weight lure can bring out the action of a long light rod just as a heavy plug will make a short stiff rod bend, and there is less air resistance from a small plug. The lighter reel spools equipped with an arbor will start into action more readily than the old type piled full of line, and there is less momentum to check to prevent backlashing.

The ideal rod, we believe, is a 5 ft. 10 in. affair that has backbone without clubbiness. It must have more than just length and lightness. If it lacks backbone the lure will arch too high on the cast and it will be difficult to drive the hook over the barb on the strike. Long casts can not be made with such a rod. If it is too clubby with its stiffness it will not bend sufficiently on the back cast to drive the lure forward on its course through the air.

When the angler feels the fish strike he should strike back to set the hook. If the barb does not penetrate the skin the fish will promptly unload the lure. This usually

occurs on the jump. The light outfit requires a snappy but not powerful strike.

The angler must attempt to mark a happy medium between keeping some tension on a hooked fish yet not so much tension as to strain any part of the tackle. In the case of the better bass, line must be given when the fish makes a run. A bass packs plenty of power and it is too husky to be hooked and horsed right into the net. If it is totally checked when it makes a run, something must give, usually it is the line, but it can be the rod or the hooks.

One bright night several of us were fishing a fine stretch in the Conodoguinet. The one member of the group had a strong new line and his rod was on the heavy side. He hooked a tremendous bass on a surface plug. The fish promptly made a power run and the fisherman froze to the handles of the reel. The force was so great that something had to give and this time it was the trihook. When the fisherman retrieved his fishless plug he found that the hook points on one of the tri-hook had been bent so that they were almost straight. Of course hooks will bend more readily when force is exerted on the tips of the hooks rather than on the bends. That is probably what happened in this case, but at any rate after this experience the plug had the appearance of being equipped with a small gig rather than a tri-hook.

The greatest interest of the fisherman in comparing light and heavy plugs centers around the matter of relative effectiveness of the lures. In every respect we believe the light weights have an advantage over their full grown additions for Pennsylvania fish and fishing waters.

As far as smallmouth bass waters are concerned, Pennsylvania is different from most states. Most of our smallmouth fishing is stream fishing. Generally speaking stream fishing is shallow water bass fishing. Much of the water we fish is less than four feet in depth. A similar condition exists in the

Pennsylvania ponds. Our natural and artificial lakes and ponds for the most part have shallow shorelines and shallow bays, and here again we are fishing a great deal of water less than four feet in depth.

A light lure does not hit the surface as hard as a heavy one and therein lies one of the main reasons for the effectiveness of the midget lure. The splash of a heavy plug startles a fish, particularly if it lights near a fish located in the shallows. Most plug fishermen have witnessed a heavy plug hit the water followed immediately by a wake going away from the plug.

On the other hand the gentle spat of a light lure attracts its quarry rather than startles it. The fisherman who has mastered the knack of the gentle delivery accompanied by a lifelike dive will fool many fish which would not be attracted by the plop of a "dead" and heavy plug. The light animated splash draws many strikes right after the plug hits the water and these are often of the spectacular type. In the case of light lures we frequently see a wake approaching the lure right after it gently dives into the water and the strike invariably follows.

Unfortunately for the fisherman of the shallows, and this includes most of the Pennsylvania bass fishermen, the manufacturers are primarily making plugs for big-mouth bass of the deeper lakes and for fishermen who are not acquainted with light balanced tackle. Large plugs are more readily available and they are made in a greater variety of patterns and colors. Before the war, however, the tendency was in the right direction, from our point of view, and midget additions of standard plugs were appearing on the market. The law of supply and demand was at work.

Some of the Pennsylvania light lure casters are now making their own tiny artificials. Fine work is being done with two tone cedar and lucite, and some effective lures

(Continued on page 14)

EARLY SEASON TROUT FISHING RESULTS

Broughton

A 7¾ pound brown trout 27 inches in length climaxed a three day pre-induction fishing trip for Nick Grubesky. The great trout was taken from Pine Creek above Titusville on a black gnat and spinner.

Easton

Charles Meinhardt was among the first local fishermen to land a prize trout at the opening of the season. Meinhardt caught his 3 lb. 17½ inch rainbow in the Bushkill near the Binney & Smith Plant.—Easton Express.

Clay

Daniel Eshelman caught a 19 inch brown trout in Middle Creek, Lancaster County.

Allentown

Neither the bite of a chill morning nor the threat of rain held back a horde of Lehigh County fishermen from joining in the trout season's opening today. Fish warden Harvey Neff stated this morning that the number of anglers thronging the well-stocked creeks and waterways which have made this county famous in the realm of rod and reel was considerably greater than that of last year.

Early reports on catches, however, indicated that the wily trout were playing hard to get, and full creels were the exception rather than the rule. This was attributed by Warden Neff to weather conditions and the exceptionally heavy turnout.

Long before dawn, anglers sought the best fishing spots, and promptly at 5 A.M. the first casts were made.

Along the Little Lehigh, from the concrete bridge at the hatchery to the dam, a comparative small area, there were 85 anglers. Cars were parked for miles along the creeks.

A goodly number of women were noticeable. The feminine influence has grown greater each year, and seemed to have

rarity.

Although the all-around picture indicated that the piscatorial pickings were slim, there nevertheless were many outstanding catches.

reached a new peak today. Servicemen

were few, the sight of uniforms being a

nevertheless were many outstanding catches.

The largest, prior to sending today's issue to press, was a 20½-inch brownie caught by Stanley Youkonis. It weighed 3¼ pounds.

Andrew Dybach hooked a 19½-inch rainbow at the Jordan dam. This undoubtedly was an old timer, for there were no rainbows stocked there this year.

Youkonis also had five others, but of smaller

Stanley Molnar had two 15-inch brownies to boast about, while John A. Jones caught a 15-inch brookie at the Little Lehigh swinging bridge.

Mrs. Ralph Kleckner apparently headed the women's division, with a 15-inch brookie.

Among the servicemen was Ensign Boyd Walker, who was thoroughly enjoying himself while on leave.

The first story of the season based on the "one that got away" came from Johnny Seng. The youngster, aged 10, was fishing yesterday in Jordan Creek, and managed to hook a whopper. In the ensuing fight, however, Johnny lost half his line and wound up with an elbow injury, which required medical treatment. Johnny will be able to attend school on Monday, but the sprained joint will keep him from further adventures in the world of Izaak Walton.

Fifteen-year-old Earl "Corky" Shell-hammer battled 25 minutes before landing a 21½-inch brown trout yesterday, the largest taken so far this season from the boating lake at Dorney Park.

The fish weighed four pounds dressed. Shellhammer lives in a home located on the park and is a member of the sophomore class at South Whitehall High School.

The champion of all champions was Charles Waidelich of Kempton, who took a 2? inch brownie in Pine Creek, a tributary to the Ontelaunee Creek. Waidelich's only comment on the event was a challenge for anyone to top his fish.

Stanley Weaver of Richlandtown Pike, angling in Cook's Creek in the Slifer's Valley section of Upper Bucks County, took a 19½ inch rainbow trout. Lure used was an earth worm

Tommy Paul, of Upper Main St., Northampton, caught the largest fish recorded for the day—an 18-inch rainbow trout in the Catasauqua Creek. Another lucky fisherman was Jim Shiminick, of Catasauqua, who reeled in a 16-inch rainbow trout also from the Catasauqua Creek.—Allentown Chronicle.

Waterford

A big trout that numerous fishermen had seen in a stream below Waterford but had never been able to land was lured by the bait on the hook cast by Wayne Weimer of Waterford.

Pulling it from the water after a spirited fight Weimer found it was a native brown trout, 16 inches long.—Latrobe Bulletin.

Hollisterville

Northeastern Pennsylvania fishermen continue to report to *The Times* sports editor



While the opening of trout season was marred by heavy rains and high, raging streams and the fishing as a whole was none too good, there were several remarkable catches made during the first several days after the sport got officially underway.

If you think some of the catches weren't out of the ordinary, take a look at the picture, accompanying this column. It's a photo of a 24-inch brown trout. The other object of interest is Leroy Bamberger, of 22 Mifflin St., popular mechanic at Bamberger's Lincoln Avenue and Cumberland Street Service Station. Leroy, incidentally, is the gent who hauled in the brownie.

He was first introduced to Mr. (or probably Mrs.) Trout at about 9 o'clock Monday night while fishing in the Hammer Creek just below the falls near the pumping station. The introduction was made by a fat, juicy night crawler attached to the end of fisherman Bamberger's hook.

The brownie made a vicious strike at the night crawler and then the fun began. A half hour later, Leroy beached the midget submarine. But in the meantime the trout staged a hectic battle. Brownies aren't noted for their aerial acrobatics, but this lady was an exception. For nearly five minutes she boiled on the surface of the water and made more spectacular leaps than Bamberger could keep count of. The fish weighed exactly five pounds, which is believed to be the heaviest trout ever caught in a stream in this section of the Commonwealth.

Why the trout was hungry enough to bite on a night crawler is hard to understand because when Bamberger opened her up, he found in her stomach one eight-inch brook trout, and two six-inch chubs.

Allie Mentzer, another Bamberger employe, said he equalled Leroy's record. He caught a pair of 12-inchers Tuesday over at Middle Creek. But a local ice cream manufacturer has them all beat. He says he hooked a 95-pounder. (Trout is his wife's maiden name.)

What is believed to be the best opening day catch was made by Americus Ronaldi of Myerstown who caught a 20-inch rainbow in the Tulpehocken.

On Sunday a well-known local attorney took his nine-year-old son trout fishing. Pop caught one and his son three. So don't be surprised if Sonny is invited to stay home the next time the old man feels the angling urge.—Lebanon News.

the catching of the largest trout taken from regional waters in many years.

On Sunday, April 30, Leonard Elliott of Hollisterville, landed a rainbow measuring twenty-seven inches and weighing seven and one-half pounds, while angling from the shore on the West Branch of the Paupack.

The distinction, however, of catching the heaviest rainbow trout goes to Frank J. Thomas of Sterling, pictured above. Boat fishing with his eleven-year-old son, Richard, Mr. Thomas pulled a rainbow tipping the scale at a few ounces over eight pounds, and measuring a little over twenty-six inches, out of Lake Wallenpaupack. The fish had a girth of more than fifteen inches. Mr. Thomas used a fly rod, a No. 6 hook and like, Mr. Elliott, had a worm as bait. It required thirty minutes before he finally landed the "beauty," the son netting the fish. The spot in the big dam where the trout was caught is twelve feet deep. Mr. Thomas hooked into another big trout later, but failed to land it.

Both trout were perfectly marked rainbows. The lucky anglers will enter the fish in the state-wide contest to determine the largest caught in Pennsylvania waters this year.—Scranton Times.

Shippensburg

John Lovell, shop superintendent at the News-Chronicle plant, caught a trout, 18½ inches in length in the Big Pond CCC dam. He said that he caught his trout with worm. Many of the other fish taken by fishermen were also hooked with such bait, he said. The trout were apparently deep in the water and were interested only in worms as many anglers using flies had no luck.

Luther Finkey landed two large trout from the bank at the CCC dam, and one small one. The largest caught by Mr. Finkey measured almost as long as the one landed by Mr. Lovell. All together, the report is that six large trout were creeled during the morning at the CCC dam with quite a fair sized catch of smaller ones.

T. G. Norris, state forester Michaux district, fisherman and sportsman, in a talk given to sportsmen of the Shippensburg Fish and Game Association recently, told of such instances. He said that temperature of the water, depth and other factors had an important part in determining the use of flies.

More than 50 fishermen were angling for the elusive trout at the CCC dam at Big Pond prior to the rain shower which drove them away. Some of the fishermen had to cut brush along the banks of the dam to find suitable spots.

A young lad caught a 22-inch trout in the Branch stream in Shippensburg, according to a report. There are some few trout in the Branch which at one time was one of the best trout streams in this section until it was polluted. A recent test made by a specialist in determining the adaptability of this stream for trout revealed that the percentage of pollution was too high for stocking of trout. However, the water temperature is suitable for their livability.

-Shippensburg Chronicle.

Bethlehem

Despite weather conditions streams in this section were lined with fishermen, some fortified with everything modern in fishing tackle; other satisfied with just lines or a line affixed to the end of a tree branch. Re-

gardless of how chilly the morning was or the quality of the equipment, the majority of the anglers arrived at the streams as early as 4:30 A.M., awaiting 5 A.M., the designated hour for the opening of the trout season.

Hundreds of youngsters were among the early birds. Along Saucon Creek, from the entrance to Saucon Park and as far southward to Hellertown, both banks of the stream and in many places in the stream, there was a mass of humanity in fact there were so many fishermen at certain spots that it was impossible to do any casting with an degree of safety. One of the fishermen, chilled to the marrow, and who returned to a place of warmth after an hour or two of angling said: "There were so many along the Saucon that you was obliged to tell the fellow next to you to move over so that you could cast."

Similar conditions prevailed along the Monocacy Creek, both north and south of Illick's Mill. An army of youngsters chose this creek as their favorite, and quite a few of them, according to reports shortly before the noon hour, made appreciable catches.

In many instances groups of fishermen angled for a certain length of time and then high tailed it to a fire built along the banks of both streams.

Paul Hartzell, member of the Monocacy Field and Stream Association, hooked a beautiful specimen. It was a brown trout and measured $22\frac{1}{2}$ inches. He made the catch in the Monocacy Creek.

Another club member, Lawrence Lehr, angling in the same stream, got a rainbow trout that was $17\frac{1}{2}$ inches in length.

One of the club's oldest members, Eddison Achey, 73 years of age called it quits shortly before the noon hour. He had a string from 9 to 11 inches.

A number of exceptional catches were also reported by anglers along the Saucon.

-Bethlehem Times.

Lititz

Freckled-faced John F. Stadel, thirteen, Lititz R 3, proudly displayed 15, 16, 17 and 19½ inch trout which he caught in the Little Conestoga Creek during the first hour of trout season. He got up at 4:20 A.M. and caught his first big one at 5:05 A.M. John said when others saw his haul they told him "You have enough, go home." He retorted, "I am home." The creek runs through the family farm.—Lancaster Sun-News.

Bellefonte

Patient anglers who figured that the trout were bound to start "working" sometime over the first weekend got their reward yesterday afternoon when the first outstanding catches of the season were recorded in Spring Creek in the vicinity of the match factory, Bellefonte.

By that time, however, many anglers who had used up their "A" gasoline tickets to drive in from as far as Pittsburgh and Philadelphia had reeled in, taken apart their rods and departed for home.

Between 5:30 and dusk yesterday afternoon, seven anglers fishing from above the junction of Logan Branch and Spring Creek proper took about 30 big ones, running from 15 to 17 inches on bait and minnows.

The anglers included Zane and William Wagner, Altoona, Cy Hunter, Lemont, and several Pittsburgh men.

While some anglers who opened the season Saturday morning and stuck it out all day came home with the limit, most of the hundreds of Izaak Waltons had to be content with one or two in their creels.

And hundreds is not an exaggeration. Saturday afternoon there were 100 cars counted between Guy Stearns farm below Lemont and the riffles some distance above Rock and one angler complained that above the Penitentiary the fishermen were so numerous that it was necessary to back into the stream like an auto in a parking space on Saturday night.

The story was the same at the bass project and below the Paradise where fishermen nailed some of the big ones that had drifted down from the preserve.

Logan Branch also was crowded as were the upper reaches of Spring Creek to Oak Hall where the crowd started to thin out and not many anglers were seen above there.

Whipple's Dam and Laurel Run were busy and Galbraith's Gap had its share of hopefuls but the catches of mountain trout were also lean. At Whipple's a 12-year-old youngster was the only one having any luck although he was flanked on both sides by older anglers. Boats on the dam reported poor catches.

Especially nettled were anglers who helped stock Spring Creek and other streams. Said they:

"It's funny where they all disappeared to."
Sam Poorman, president of the Bellefonte
Sportsmen's Association, said that Saturday's
catch was the poorest he had ever seen although the fish wardens reported the most
number of men on the stream in some years.
A number of Bellefonte anglers staying in
a Spring Creek cabin reported six fish the
first day.

A 24-inch rainbow trout, caught less than a block from his home Saturday gave Franklin Clemson, 10, Bellefonte, the jump on many Izaak Waltons.

His catch, which was hooked on a 15-cent rod with wrapping cord for a line and a bread crumb for bait, was made in Spring Creek near the Lamb Street bridge, Bellefonte.

Other fishermen reporting successful catches on the first day of the trout season were Joe Herman, Zion, who bagged a 15-incher. Alvin Dobson and Richard Workman, Mingoville, reported catching them up to 13 inches.

Kenneth Larimer, a Centre Daily Times carrier, Bellefonte, reported a catch of three trout.—Bellefonte Daily.

The 30½-inch trout was caught in Penns Creek below Penns Cave last Wednesday afternoon by William McHenry, of Ebensburg. It was hooked on light tackle with a minnow as bait, and was netted by R. K. Dippery, of State College, after a 10-minute struggle.—Bellefonte Center Democrat.

Catches Big Trout

Believed to be one of the largest trout caught so far this season, a 29½-inch rainbow was landed by John "Moose" Ammerman of W. Logan Street, just below the Lamb Street bridge, Bellefonte. "Moose" was using worms for bait.

-Bellefonte Gazette.

Pottstown

Irvin Peiffer claimed something of a record when he reported a trout catch of 23¹₂ inches, weighing three and one-half pounds,

to end the second day of the trout season which continues through July 31.

Peiffer landed the huge "brownie" late yesterday while whipping a small stream at Forgedale in the neighborhood of Bechtelsville. His only other catch of the day was a small "brownie" about ten inches long.

An ardent fisherman for the past six years, Peiffer said his catch will not go into the frying pan, rationing notwithstanding, but will be stuffed and mounted for everyone to see.

"Something like this happens only once in a lifetime," he suggested philosophically.

His son, Irvin Jr., who accompanied him, caught one 12-inch rainbow trout. Peiffer's Saturday fishing trip netted two "small ones," big enough to be legal, "but not big enough to brag about."—Pottstown Mercury.

Mill Hall

John P. Blaschak, Mill Hall, took the lead in the Clinton County Sportsmen's Federation contest for the largest brook trout caught this season when he landed a big one in Fishing Creek at Mill Hall yesterday afternoon. Thomas C. Snyder measured the trout at 15 13/16 inches.

Blaschak used a night crawler for bait.

The biggest brook trout reported here previously this year were $12\frac{1}{4}$ and 12 inches.

To have trout officially entered in the contest, a record must be mailed to Mr. Snyder, Main St., Mill Hall, after the fish is measured by a designated party (a director or officer of any county fish and game association, game or fish warden or deputy).

Max Henry caught a 22 inch brownie which weighed three and a half pounds. He landed the big one on Fishing Creek along with three smaller trout. The rookie angler was so proud he displayed it in his restaurant window. Some people said it was accidentally hooked in the gill.—Lock Haven Express.

White Haven

Alex Swerdon, of White Haven, an employe of the Atlas Powder Co., in that town, came home on Saturday night with the prize catch for the opening day of the trout fishing season. The angler landed a 21-inch brown trout at Lake Wallenpaupak.

Mr. Swerdon and Henry Fulke were fishing, and when the fish struck, the former was just about in a doze. He saw the line disappear, and after some lively action he was able to land the prize. The fish is now on display in the window of the Jones Tavern, Main Street, White Haven, where it is the envy of all fishermen.

-Hazleton Standard Sentinel.

Shippensburg

The first official entry in the trout contest sponsored by the Shippensburg Fish and Game Association has been made by Paul Archambeau. Mr. Archambeau, a member of long-standing in the association, caught a 19-inch, three-pound brown trout in a small stream between Longsdorf and Huntsdale.

He said that he was using a $3\frac{1}{2}$ ounce fly rod with worm bait when he caught the trout. The stream in which he hooked the fish flows into the Yellow Breeches Creek. He reports that he also caught five other fish, three of which were brook trout, all measuring more than ten inches in length.

Mr. Archambeau said that fishing is one of his favorite outdoor sports. Last season

he said that he caught several trout larger in length but not quite as heavy.

Sportsmen who enter the contest sponsored by the game club stand a chance to win \$30 in prizes being offered for the largest trout caught within a 20-mile radius of Shippensburg during the current season. To be eligible to enter the contest, anglers must be members of the association.

Scott Howard, North Queen Street, chairman of the special awards committee, has announced that three prizes of \$10 each will be given for the largest brown, brook and rainbow trout entered. Fishermen are asked to take their catches to the office of the News-Chronicle for weighing and registration. Mr. Archambeau's entry is the first received at the newspaper office to date.

-Shippensburg News-Chronicle.

Pottstown

Woman Angler Lands 19-Inch Rainbow Trout

A 19-inch trout, believed to be the largest ever hooked by a Pottstown woman angler, was scooped out of Mantarny Creek by Mrs. Harry Williams. To make her joy overflowing, she also hooked a 17-incher.

Fishing from the concrete bridge where the Grosstown Road crosses the creek, Mrs. Williams let her lure float down over a hole not over 18 inches deep. The big fellow struck and she fought him from the bridge until her line fouled on a tree.

Racing off the bridge and down stream to renew the fight, she got to the water's edge and was pulling the rainbow beauty out when he got off the hook. Mrs. Williams jumped right in on top of the fish, smothered him in her hands and arms and pushed him out on shore.

Fishing in Iron Stone Creek her husband landed two rainbows 16 inches long.

Pottstown Mercury.

Mifflintown

Small catches of trout have marked the first three weeks of the season in Juniata County, according to Charles V. Long, of East Waterford, State fish warden, who blames the rainy weather and high, muddy streams for the light catches and small trout. No large trout have been reported taken in either Lost Creek or Licking Creek, either of which usually give up the record fish of the season.

Roy College, of Pottstown, caught a nice string the first week fishing in Horse Valley, near East Waterford, his prize fish being an 18½-inch brownie. The Mahatonga Creek, near Richfield, in the northeastern end of the county has yielded up some sizeable trout. Robert Snyder, Richfield bank clerk, hooked two browns. 21 and 19 inches long, respectively, from the mill dam below the village, last week. This stream has only been stocked for about four years, and anglers are now starting to "cash in" on past stocking.

-Harrisburg Patriot

Harrisburg

By CLYDE ROLLER

There seems to be fairly general agreement that trout fishing has been considerably below par, except for scattered early catches, but apparently there is no cause for alarm, since conditions have been such that a light catch was to be expected. Stream and tem-

perature conditions have combined to keep creels comparatively light, with the result the amount of fishing has been sharply curtailed by unfavorable conditions.

However, one doesn't need to be too much of a Pollyanna to realize that there are two sides to this situation and that one of them is encouraging. If catches have been light it naturally follows that the streams have not been depleted of their stocks and trout recently stocked will have a better chance to become adjusted to their new environments. As a result, catches can be expected to be spread throughout the season to a greater extent.

In other words, a more even season of fishing is likely to result once the streams and the weather settle down. As for the streams themselves, it is reported that they are in about the condition that one might suppose after a period in which rain fell on something like 15 out of 24 days. Streams in general, as far as this section is concerned, are reported to be high and in some cases, quite muddy. There seems to be little likelihood of favorable stream conditions for two or three days, although if there is no more rain before that time fishing may be back somewhere near normal for week-end anglers.

Those who want to get out before the streams return to normal will do well to hunt a mountain stream, because it is likely to be cleared up before the lowland waters. Even if the water is rather high, it will probably be considerably clearer than that of the average lowland stream. Fishermen will be able to control their lines fairly well by weighting them.

Even though conditions have been poor since the season opened, some fishermen have been picking up fine catches from time to time.

W. C. VanBoskirk caught a rainbow trout 18½ inches in length in the Yellow Breeches Creek, near Huntsdale, as well as several smaller trout. Charles Peters, with whom he was fishing, also landed several beauties.

John Conrad, of New Cumberland, caught a 19-inch rainbow trout, one of the largest trout reported in this section since the season opened, in the Yellow Breeches Creek. He was using a fly and spinner combination when he made the catch

when he made the catch.

William F. "Bill" Laskowski, president of the ancient and honorable Whistle Pig fishing club, prides himself that he is pretty good with the rod and line, but it develops his son, Harry, is better.

Harry, who operates Bill's farm near Carsonville in the upper end of the county, on Saturday landed a 23-inch brown trout out of the tiny branch of Powl's Creek which runs close to the Laskowski farm.

This is the same brownie the elder Laskowski had been flirting with for the last three years. With flies, spinners and whatnots, Bill had been trying to lure this beauty from a hole beside a log where it had long been residing. Twice, Bill hooked the big fellow with some sort of fancy device but twice the fish got away. On Saturday, however, Sonny Boy lifted it to the bank with an ordinary earthworm on a rusty hook.

One of he happiest anglers at the opening of the trout season in the Harrisburg area today was Melvin Shaeffer, proudly displaying a 15-inch beauty he took from the waters of the Yellow Breeches in the vicinity

(Continued on page 15)

BAITS FOR STREAM FISHING

(Continued from page 7)

cluding both insects and small fishes it is equipped with a pair of powerful jaws. This fact frequently is impressed on incautious fishermen as a lusty, full grown helgrammite is capable of bringing the blood when it nips one between the fingers or in other tender spots. The safe way to grasp this tough and vigorous insect is by placing the thumb and forefinger just behind its wide horny head. A net of some kind is useful in gathering this bait and I usually have one of my landing net rings equipped with a net of 1/4-inch mesh for this purpose. The net ring is placed down stream against the bottom before the rocks above it are turned to dislodge the helgrammites under them. Where the upper surfaces of rocks are thickly covered with vegetation the insects may be found hidden among this and are dislodged by merely stirring it vigorously.

As the helgrammite is equipped both with gills for absorbing the air from highly oxygenated water and spiracles or breathing pores for taking the air direct, it can live for long periods out of water if care is taken to keep its body moist. It can not however exist very long in stagnant or poorly oxygenated water and therefore never is found in ponds or lakes although some of its near relatives, the smaller fishflies, of the genus, Sialis, live in such locations.

Concern sometimes is expressed that the commercial exploitation of this insect for bait purposes may result in its extermination but I believe such concern is hardly justifiable. Persons expressing such fears possibly have in mind the extermination of the passenger-pigeon, the Carolina parrot or even perhaps the buffalo but these cases are not at all comparable with the helgrammite or other insect life. If the enormous powers of reproduction of the insect which may lay from 2 to 3 thousand eggs, are taken into consideration it should become apparent that while large scale collection of the insect from a given stream may temporarily reduce its abundance, it will rapidly regain abundance when attention is transferred to other locations. I have seen too many strenuous but fruitless attempts made to exterminate other insects to be greatly worried over this matter. The worst enemies of the helgrammite and other aquatic insect fish foods are pollution through human carelessness and neglect, and severe drought. In other words the same dire influences that serve to injure and limit our fish life of the streams. Although the helgrammite possesses six strong legs its principal means of anchorage in swift water is a double pair of hooks located on the extreme tail end of the body as shown in figure 4. Before baiting with the insect it is well to clip these hooks off if trouble and improper language are to be avoided. Otherwise when cast and allowed to drift along the bottom the helgrammite is quite likely to anchor its tail firmly to a rock or weed and may be the cause of a broken leader and lost hook. A pair of leader clippers is handy for removing these hooks but in doing this care should be taken not to cut its skin as it will quickly bleed to death if this occurs.

Some anglers prefer to break the jaws of the helgrammite when placing it on the hook, under the impression that this renders it more readily acceptable to the fish. It seems quite doubtful however, that this is at all necessary or that it has any effect on the results. Not only do the bass and sunfishes, but that unmitigated nuisance and prize bait stealer, the river chub know well how to deal with the pugnacious insect.

Most fisherman are fully aware that there is no more attractive bait for the game fishes than the craysh or fresh water "crab" when this is in a newly shed or soft shelled condition. Right here it should be clearly understood that there is no known way by which this soft shelled condition can be artificially produced. The principal reason underlying the shedding of the shell is to permit growth of the crayfish. The frequency of occurrence of this phenomenon is governed by the rapidity of growth of the creature, which in turn depends upon the abundance of food



Many anglerettes were among the fishing throng on the opening day of the trout season. This scene was taken on the upper Yellow Breeches Creek.

for it and probably by the temperature of the water in which it lives. However, the cravfish even in its hard shelled condition is not to be despised as it is a good bait for use in most streams. In using it, the fact should be remembered that it is its fleshy tail that forms the tid-bit for the fish. For this reason the hook should be inserted well into the tail. In fishing the crayfish for smallmouth bass in the larger streams a special technique is useful. In this a boat usually is employed which is anchored just above a likely riffle and deep pool. The baited crayfish is permitted to slide down the riffle into the pool below, then at least 15 feet of line is stripped off the reel and carefully coiled on the seat so that it may run freely through the guides when the fish takes. When this occurs slack line is carefully paid out until the fish stops and gorges the bait. Then the strike is made and the circus begins. I have seen many large fish taken from such streams as the Delaware by such procedure.

Another effective and very durable bait often used for bass in this fine stream is the larva or young of the sea lamprey or "lamper" eel. These blind and rubbery creatures are dug from the mud banks of the river and are used either in trolling or casting; in the latter case are fished in a manner similar to that just described.

Observant anglers often utilize profitably for bait such land insects as occur numerously during the fishing season. In this category it seems hardly necessary to mention grasshoppers except to remark that in some localities certain species of hoppers, which pass the winter as half grown nymphs or adults, become available much earlier in the season than do the more abundant kinds that live through the winter in the egg stage. These latter seldom if ever are large enough for bait purposes before the last of July in our latitudes while the former usually can be used by late April or early May. I have frequently gathered them from rocky sidehill pastures in Northern Maryland and Virginia at that period. For carrying grasshoppers to be used immediately, my choice, after having tried several types of cages and boxes, is a glass bottle of convenient size and shape. The cylindrical ones commonly used for packing pickled olives in small quantity serve admirably for this purpose. Ventilation is provided by cutting a thin slice from one side of the cork as shown in figure 6. As may be seen from this, the cork is attached to a string which in turn is fastened to the bottle neck, the same string being continued to serve as attachment to a trouser loop.

For catching grasshoppers nothing is better than a stout net of bobbinette or curtain cloth, and the best time to use it is in early morning before the hoppers become warmed up by the sun. With such a net the hoppers may be captured at any time of day but labor and exercise are saved by its early morning use. I carry such a net in the trunk of my car all summer—or at least I did so when it was possible to travel in my car.

Ordinary field, or black crickets, also make fine bait but they usually are not plentiful until September or later. They are so soft and fragile that I prefer to place them on the hook tail first as otherwise the least touch by a fish may ruin the bait without hooking it. For fishing crickets a long shank, number 6 hook is about right.

In an article entitled "Forked Tailed Cats" recently published in the Pennsylvania ANGLER, I extolled the common pestiferous bag worm as bait for these and other fresh water fishes. Smallmouth bass take them eagerly as I demonstrated years ago in the Conodoguinet in the Cumberland Valley. In July and August, this destructive insect may be found defoliating arbor vitae and other ornamental evergreens and it also feeds largely on black locust at times. When removed from its basket or case, so far as appearances are concerned, it might be termed a dry-land caddice worm which it closely resembles. Like the latter insects too, it covers its case with fragments of leaves of the trees on which it may be feeding. This case is composed of an exceedingly tough silk which can not be torn with the

(Continued on page 19)

Light Lures vs. The Heavy Weights

(Continued from page 9)

that are new and different can be found in the boxes of some pluggers.

We believe that any bass which will take a large plug would also take a smaller one at the same level, however, we could never be brought to believe that any bass which would take a small plug would also take a large one. This applies to small-mouth and large-mouths alike. The reactions of the two are very similar and pickerel are not far removed.

A light lure is approximately the same size as the average bass food and unquestionably it is often taken as such, whereas, the attractiveness of the very large plug depends for the most part upon arousing the fighting instinct in game fish. The smaller lure undoubtedly works this way at times too, because some of the strikes are of the vicious type, however, many are of the deliberate businesslike nature and it is probably fair to assume that in the latter cases the lure is taken as something to be eaten.

All in all we believe light lures to be more effective than "standard" and in addition light lure balanced tackle makes for nicer casting and more interesting playing of fish. The light lure is bringing about the refinement of plugging just as the dry fly has affected the sport of fly fishing.

Fish Farm Owner Has Fight With Muskrats

At his fish farm on the Sandy Lake road, H. E. Klotz has been waging a winter-long battle with muskrats. The aquatic rodents constantly burrow through the dams segregating the fish, flooding the area and mixing up the various species of fish.

A professional trapper was employed, and a bag of 70 muskrats was the result. There are many more than 70 muskrats in the area, and the untrapped continue to burrow with a will.

-Greenville Record

Nice Rainbow

As entered in a local fishing contest, Charles L. Keyser of Pennsburg, R. 1, caught a 19 inch rainbow trout in the Little Lehigh. The fish, caught on a minnow, weighed two pounds and three ounces.

THEY ALL FISHED

(Continued from page 3)

on the side, but he only worked until he could accumulate fifty or a hundred dollars. Then he would disappear into the woods for months, living entirely alone.

Fishing was not sport to The Woods Runner—it was part of the battle for existence. When flies failed he used bait, or wove nets out of twigs, or made spears out of saplings. He would eat anything, and supplemented his fish with lily bulbs, wild rice, tender bark, roots, and other Indian fare.

I had a lot of regard for The Woods Runner, for he inspired me to make my first camping trip, in mid-winter and alone, and once almost persuaded me to go down the Mississippi with him in a canoe.

I don't know what became of him. He disappeared, and never showed up again. I often wonder if his bones are bleaching in some brushy ravine because he was not quite enough of a pioneer.

One of my best friends is The Iron Man. The name suits, for he is one of those burly, hard-muscled men who always bulge out of their clothes. He fishes to express his power to endure discomfort and hardship; he has learned to "take it" and to do without.

He will eat, wear or endure anything, apparently without even knowing what it is. As he fishes only with me he has never bought tackle, using whatever I have handy. He camps without bedding, sleeping in his padded motorcycle-driving suit—he has ridden a motorcycle for twenty years-and insults me about my numerous blankets. I never dare to let him cook for he cannot be restrained from throwing eggs, raw potatoes, bacon, bread, coffee, knives, forks and the other elements of a meal into one frying pan, stirring them vigorously and serving them when the first ingredient is cooked. He would eat it, too, I am convinced, without even tasting it.

Black flies, storms, breakdowns, smashups, fights or bad fishing are all alike to the iron guts and iron self control of The Iron Man. He grins an iron grin, keeps his head and does what is needed. His tragedy is a difficulty of hearing which, perhaps, has contributed to his iron silence and impassiveness, but when he speaks he is pointed and sometimes cryptic.

One such remark I shall always treasure. I had upbraided him for coming on a fishing trip without a hat.

'Did you ever see a bald-headed Indian?"

Figure that one out.

Compare him with Doc Tinckerberry, who can walk the legs off a brass kettle. People who have not tried him think T. T. Tinckerberry is an M.D., but he is really a veterinarian who turned to doctoring humans when horses became scarce. Doc fishes to express a thrist.

His fishing is not fancy. If you want to hear some purple-embroidered language served up by a man who spent forty years being kicked by annoyed horses, suggest nymph fishing, eighteen foot leaders or fanwing flies to Doc Tinckerberry. He prefers a No. 2 hook knotted directly to an undressed silk line, which in turn is tied to a veteran steel fishing rod. When he "fishes fine" he uses a single eight-inch nightcrawler, but when he means business, he puts on half a dozen. And does he get trout! For bass, he uses the same rig, with a minnow or a helgrammite for bait. But the Doc really prefers ice-fishing; it leaves both hands free for conveying stimulants to the mouth.

Doc looks like Santa Claus gone to seed. He is built like a washtub and his nose is so red and prominent that when he weaves home down the track, evenings, the freight engineers think he is waving a danger signal. His hackles are sparse and gray, but he sports a magnificent beard-what we used to call the Aeolian harp, or set of lace curtains. It is white, kind of, but so discolored around the mouth with tobacco juice that it looks as if it had been scorched by the apple jack which is his favorite beverage.

Doc Tinckerberry is an exacting fishing companion and never more so than when I am preparing for a trip with him.

"No nonsense, now," he says sternly. "Remember that the most important fishing implement is a corkscrew. Spiritus frumenti, quantum suf," he adds, with a leer.

That last, I think, is druggist's Latin and

means, in a general way, "Be sure to bring enough.

One of my recent companions is The Cop, who fishes to express a passion for firearms; he is a gun bug.

I met him professionally, after committing a traffic violation. He listened sternly until I happened to remark that I was going fish-"Where do you fish?" he asked eagerly, stowing away his summons book, and before we parted we had made a date to try out a stream he knew. When I called for him he was assembling his tackle. His final act was to stow a large and potent John Roscoe, or shooting iron, in his pants band and a small automatic pistol in his pocket.
"In case of snakes," he alibied. "It's full

of them."

I am supposed to be teaching him dry fly fishing, but he makes small progress. I give him his lesson and go off to fish the upper stretch, leaving him to practice. Soon I hear the slapping reports of an automatic or the bonga-a of a black-powder .45. I hasten back and find that, instead of doing his home-work, he had been shooting at a mark. He always says sheepishly that he saw a snake, but he never produces one, although he is a deadly shot.

How deadly, a star on his sleeve testifies. It commemorates a black and bitter midnight when an ominous citizen stepped from a car with murder in his hand. He shot first, but The Cop shot best, and so discouraged the citizen that he departed this life. Maybe that's the kind of snake The Cop is practicing for.

Finally, there is The Fishing Editor. He fishes to express his disgust for fishing. Yes, I mean that. The Editor has spent a lifetime in various aspects of the fishing game, starting as a barefoot boy with a cut pole. It follows that he had been all through the

Superficially, his existence seems ideal. His work brings him in contact with all kinds of anglers and if he were to accept all the invitations he gets, he would be able to say that he had fished in Africa, Chile, New Zealand, Mexico, Spain, Germany, England, Scotland, Norway, and literally every trout and salmon stream of consequence in Canada and the United States.

He has seen, or practiced every conceivable method of taking most of the game fishes of the world. He has listened to the arguments of every inventor, researcher, nut, crank, expert and theorist in the game. And he is besieged by smooth-spoken birds who want to put fast ones over on him for purposes ranging from malicious mischief to free advertising.

So The Editor is fed up. He fishes for salmon on the Restigouche, trout in the Ausable and bass on the Delaware, but he does not call that fishing-it's work. No; when he fishes he goes to a certain barn and takes a cut pole from the corner, digs worms by the manure pile and then goes to a rattling, scatterbrained little mountain brook behind the barn. The brook is always glad to see him, but it does him no favors; what he gets he works for.

At noon he makes a fire the size of a derby hat and broils the fat little native brook trout on willow switches. Then, without bread and butter, salt, napkins or tableware, he gnaws them off the switches like a dog. Like a lucky dog, I mean!

SOIL AND FOREST ESSENTIAL FOR PENNSYLVANIA PROSPERITY

(Continued from page 2)

for forest utilization has been drafted to meet the war emergency. It includes the selective system of cutting mature timber. Regulations which guarantee the protection of smaller trees, watersheds, recreational areas, wildlife and other essentials of sound forest practice are provided in the contracts. The timber cutting is at all times under the immediate supervision of the Department. Every day inspections are made to see that the contractor is carrying out the provisions contained in the agreement.

It is a pleasure to report that Secretary Kell has formulated an excellent post-war program for improving the State Forests. Various projects have been set up, with the estimated number of man-days for each project. These will give work to returning veterans who may have trouble in finding employment.

We must take care of the trees we have. We must plant more. Intelligent care of this great and growing asset is paramount.

Forests are nature's way of preventing floods and restoring the soil. Both are vitally important to Pennsylvania. Forests and rich farms are a permanent asset to set up against the staggering debt that our children and their children must assume. We have been short-sighted and unfair to the coming generations. What we can do to rectify our mistakes we must do. We must carry over our progressive spirit into the far future.

This has been a progressive nation. Free enterprise in America has won the battle of production, We have made more guns. We have made better guns. We have made more and better planes, trucks, ships and preserved foods than any other nation. Our living standards have been higher than those of any other Country in the world. Why?

Because of our great natural resources, converted to our use by inventive genius and hard work. Because of the mighty spirit of free enterprise that gave every American his opportunity in a free society.

Now we have come to a time when we must be more conservative. Through our research laboratories and technical skill we must make our raw materials stretch farther and farther. In this great undertaking government must see that all are treated fairly. Government can provide the results of research and see that these are free and open to all. Government can aid, but government must not direct.

Government can help in the tremendous undertaking of creating new forests on our submarginal lands. We no longer need this acreage for agriculture. Modern methods of farming have made it possible to produce so much more per acre and per man than was possible in past generations that this submarginal land can be spared from the plow.

Government can help the small business man by giving him an opportunity, free from hampering restrictions and burdensome taxes, to enter the lumbering business. The emergency of war is bringing back this business in many parts of the United States. It should be brought back in Pennsylvania. No State among the older States has a better opportunity. Government can do a great thing, if it will. It can restore freedom of action.

That is what our armed men arc fighting for and they must have it when they come home. If men, at any time in human history, ever earned the right to pursue happiness, they have earned it. To be able to pursue happiness is the freedom of action which really embodies all of freedom.

Today we are thinking in terms of war. We are acting in terms of war and will be until this war comes to a successful conclusion. We hope and pray that success will crown our efforts and that the war will end during this Administration.

Peace will bring a multitude of problems. They will be equally as pressing as those confronting us now in these years of battle.

First to receive our attention and consideration will be the soldier as he comes home. Under no circumstances must we permit the millions of veterans to become another lost generation, perplexed, worried and unable to find themselves. Wherever possible the soldier must be returned to the job he left, if he wants it.

Work, care and consideration he must have. It may be that thousands of them can find freedom of action and the future pursuit of happiness in the Penn's Woods of tomorrow.

FISH FOR TROUT FOR FUN

(Continued from page 8)

on hour. A check on Holland Lake, Luce County, that same year showed that 18 fishermen removed 125 trout before 8:00 a.m. on opening day. The same story came from creel census checks made on other small lakes which were stocked with legal-sized fish.

Probably one of the best arguments for attainable limits is psychological. Ken Reid, National Izaak Walton League head, tells the story of meeting two fishermen on a stream when the limit there was 25 trout. Each was close to the limit but each felt he had failed that day because he had not attained it. Several years later when the limit was 15 he met the same fishermen who were beaming over limit catches although they had fewer trout in the basket than on the first occasion.

It is reasonable to suppose that a lower limit in Michigan would satisfy more anglers and would help to spread the fishing for hatchery-reared trout in small lakes and in streams. Results from the studies reported suggested that different limits should be placed on trout taken from lakes and streams because they are more easily caught out in small lakes and because the average size of a trout from lakes is much greater than the average from streams. Several states impose limits as low as 2 per day in certain waters, especially in lakes, and in a number artificial lures only are permitted on certain waters. It is recognized that this might present some enforcement problems but other states do not seem to have found them insurmountable nor have such problems been reported here in enforcing the special limit of 5 trout in force on Lake Charlevoix and Birch Lake.

Based on research and observation, it would seem that the limit on streams might properly be set at 10 and on trout lakes at 5.



This Lake Pleasant, Eric County rainbow was taken by E. P. Hoofring of Vandergrift on a gold Devon. It weighed 5 lbs., and measured 23 inches in length.

EARLY SEASON TROUT REPORTS

(Continued from page 12)

of Rose Garden. Competing with older and more experienced fishermen, the 12-year-old New Cumberland lad also had three other smaller trout.

Fred W. Rockey, Enola, reported catching a 19-inch trout and another one that measured 14½ inches.—Harrisburg Evening News.

Coatesville

Angler Catches 'Biggest' Trout

Fishing in Birch Run, Jesse Labeck, Coatesville, caught a rainbow trout which measured 20½-inches. It is believed to be the record trout caught in this section so far this season. Labeck said the fish gave him a long battle before he landed it.

-Coatesville Record

Dear Charlie:

On May 11 I had a shipment of brown and rainbow trout arrive here at New Wilmington for stocking in Deer Creek near Pulaski. There were about a dozen sportsmen turned out to assist in the stocking and among them was Lawrence County's oldest fisherman, Mr. John P. Rae, 322 Locust St., New Castle. Mr. Rae is in his 90th year and each year since fishing licenses have been issued both he and his wife have always purchased their license. Both are also members of the Lawrence County Sportsman's Association. He was accompanied by his son Harry M. Rae and they both really got a kick out of helping to stock the trout and both remarked that they never would have belived such beautiful trout was being stocked by the Fish Commission had they not been present to see them. Mr. Rae has a very keen mind and would stand there and tell some of his experiences of fishing and hunting. To have reached this ripe old age and still have it in your blood is really something and I trust you will write up a little item on this.

Our trout for stocking this year have been wonderful. The early season did not prove out too good, but during the past two weeks the fly fishermen have been doing very well. We have had some dandies taken; 23½-inch brown being the largest taken in Slippery Rock Creek, then there have been eight around 20 inches and quite a number 17, 18 and 19 inches. There are more fishermen out this year than last.

With best regards,

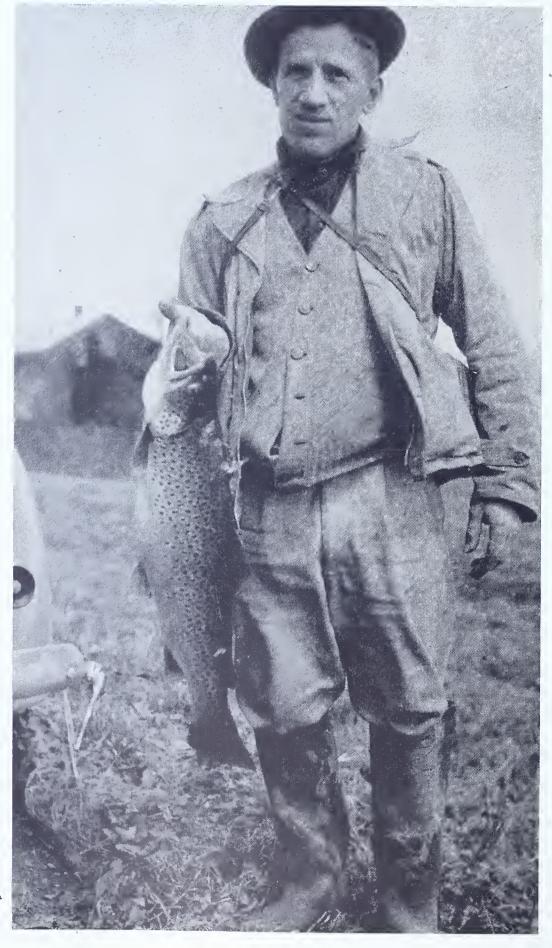
WARDEN ROSY WHITE, New Wilmington

American Progress In Fly Fishing

(Continued from page 5)

known. Each joint is made to slide into another, and the whole is contained in a hollow butt similar to the walking cane." As a matter of interest, this telescopic walking cane rod, was first mentioned by Dame Juliana Berners, Prioress of Sopwell, and author of "A Treatyse Of Fysshynge With An Angle" 1496.

A few additional items of interest to Pennsylvania anglers follow: "In some parts of Pennsylvania, a fly called the Professor is used with good success. It is made on a number 4 trout hook, and is dressed with a bright yellow worsted or silk body, and a light grey mottled wing." As the majority of you know, this fly was named after Professor John Wilson (Christopher North), supposed to have been the best Scottish fly



One of the largest brown trout taken in Pennsylvania during the current season was caught by D. C. Seiple of Cleveland, Ohio, from the Little Conneautee, which flows through Erie and Crawford Counties. This fish was exceptionally great in girth weighing 7½ pounds. It measured 26 inches in length.

fisher north of the Tweed, around the year 1825.

Brown also mentions that: "The fin of a trout is successfully used in certain parts of Pennsylvania, for taking the trout. It is used by casting and drawing, similar to roving with a minnow, or in the manner of throwing the fly."

As an encouragement to fly fishing aspirants, who were sadly in the minority in those days, Brown offers the following in his fourth edition that appeared in the year 1850:

"The scientific and graceful art of throwing the artificial fly, is a beautiful accomplishment, but not so difficult as is generally imagined. In the months of May and June, the raft and lumbermen from the Delaware and rivers of Pennsylvania, are seen in the fishing tackle stores of New York, selecting with the eyes of professors and connoisseurs the red, black and grey hackle flies, which they use with astonishing dexterity on the wooded streams of their mountain homes. Those therefore who have never tried this method of fishing, with such untutored examples before them, should make a little effort towards the successful practise of this branch of the art."

In the year 1847 the first American edition of Izaak Walton's "Complete Angler" appeared, under the nom-de-plume of the American Editor. The book is sprinkled with copious notes and annotations relating to the then present day fishing practices, and the work was in reality edited by the Rev. George Washington Bethune. Of all the Walton editions this book has received more praise than any of the others. Suppose we note what changes have been wrought up to this time. Of the rod, Bethune comments:

"As few persons in these days make their own rods, it may be well here to give some directions how to choose or order a rod, to be made. A trout fly rod should not be more than fourteen feet and a half at furtherst. The butt solid, for you will need weight there to balance the instrument, and the spare tips will be carried more safely in the handle of your landing net. A rod in three pieces is preferred at the stream, but inconvenient to carry, and, if well made, four will not interfere materially with its excellence; i.e. the butt of ash, the first joint of hickory, the second of lancewood, and the tip of East India bamboo, or, as I like better, the extreme of the tip of whalebone, well spliced on. The proper elasticity is when a quarter of an ounce weight attached to the tip causes it to descend, five feet below the horizontal line of a rod, fourteen feet long. The entire weight of the rod, should not exceed a pound." Imagine using such a limber rod today! Bethune continues:

"Let your reel be not too large and a multiplier, without a check or balance to the crank, for the first will annoy you, besides being of no use, and the last make your reel turn faster than you think. A click may be added. Kelly is said to be the best rod maker in Europe, but Conroy in New York can make one so good that it will be your own fault if it be not successful."

Hair lines were still in vogue, and Bethune states that: "Few anglers in this country will make as good lines, or make them as cheaply as they can be had at the tackle shops, but it must be noted that angling in our mountain streams requires an adaptation of their color to that of the water. As

a general rule, in a shaded forest stream, the grizzly grey line is best; in a more open country, the pale sorrel, light slate, or amber, may be better at times."

"Flies are divided into flies proper with wings; and Palmers, or hackles, without No angler goes unprovided with plenty of brown, black and red (of different shades) hackles, made on several sizes of hooks. The red hackle is 'the Queen of them all,' but in our northern streams on a warm bright day the black is deadly. When two flies are used the lower (or tail, or end, or stretcher) fly should be the heaviest and winged (though a large hackle may be used); the dropper should be looped on the bottom line at about three feet or so from the stretcher or a gut of such length as that it will play on the water. The upper fly is to be watched leaving the tail fly to follow. If another fly be added, its gut should, of course, be proportionately longer; but two flies are generally quite enough, if well managed. Palmers are used mostly as drop flies; and the droppers should be light. Care should be taken to have the bottom line of due proportions."

With reference to the leader or bottom line, Bethune quotes a passage from Saunders, "Complete Fisherman," 1724, which is most interesting, since it contains the first information as to the use of gut by fly fishers. The quotation from Saunders work follows:

"The Swiss and the Milanese, and the inhabitants of the more mountainous parts of Italy, are esteemed the great artists at trout fishing, perhaps in the world; and it is not unlikely it may be occasioned by the many fine trout rivers which they have among the Alps, and falling from these mountains either into the Po on the south, the Rhine on the north, or the Rhone on the west side of that country. These, they tell us, make a fine and exceeding strong hair or line, resembling a single hair, which is drawn from the bowels of the silkworm, the glutinous substance of which is such, that like the cat's gut which makes strings for the viol and violin, of an unaccountable strength, so this will be so strong, as nothing of so small a size can equal it in nature; for it is rather smaller than the single hair ordinarily used in fishing, and strong as the catgut itself; so that with these lines, they secure the strongest fish in those rivers where they have some trout very large, as well as other fish. I have seen an imitation of these worm-gut lines in England, and indifferent strong too, but not like those I have mentioned, in Italy; yet these will hold a fish of a good size too, if she be not too violent, and does not nimbly harness herself among weeds and roots of trees, where she cannot be pulled out."

To keep the evolution of the fly rod in proper chronological sequence, I must now quote a few paragraphs from the "Book of the Black Bass," by J. A. Henshall, 1881.

"The first split bamboo rods were made by Mr. Samuel Phillippi, a gunsmith of Easton, Pa. about the year 1848. Mr. Phillippi was an angler of some local repute, and died about 1878. Mr. Charles H. Luke, a veteran angler of Newark, N. J. formerly lived in Easton, and was a near neighbor of Phillippi, with whom he fished and hunted on many occasions. He naturally spent much of his spare time at Phillippi's gun shop, where about 1850, he watched him for hours

at a time, making split bamboo trout fly rods, in which, being a fine and exacting workman, he took great pride.

"Mr. Charles F. Murphy, of Newark, New Jersey, famous as one of the best makers of split bamboo rods, and who has few, if any, superiors as a fly fisher, corroborates Mr. Lukes testimony, and says that Phillippi used split bamboo for fly rods, certainly as far back as 1848, and further says: 'I am certain you can give Phillippi credit for the discovery of split bamboo for fly rods, without fear of contradiction.'"

"Phillippi's rods were made in three pieces or joints, two of which, only, were of split bamboo, the butt being ash, and stained to imitate bamboo; but the bamboo joints were made on the same principle as those of today, though composed of but four strips. Phillippi's rods seem poor things now, but at that time they seemed wonderful." It must be remembered that the above was written in the year 1881, and that remarkable strides had occurred in the interim.

In the year 1849, Henry Herbert, writing under the pen name of Frank Forester, came out with "Fish and Fishing." Suppose we check its contents to see if any changes had been wrought since Bethunes work on 1847 and the credit given to Phillippi in the year 1848. Of the rod, Forester says:

"The trout rod should be twelve feet long, and as pliant, almost as a coach whip, equally bending from the butt to the tip. It should be composed of hickory, lancewood, or bamboo, with a solid butt of ash, at the extreme lower end of which should be attached a simple click reel with a balance handle, but without a stop, capable of containing thirty yards of London made hair or silk line, tapering equally from the reel to the point. The bottom, or leader, as it is generally called in America, should consist of about five yards of round tapering silk worm gut, and the flies should be three in number. Plain rings should be used on a fly rod, and not the new tubular metallic guides. which stiffen it too much, and prevent its equal curvature under a strain.'

Concerning flies, Forester comments: "The flies which I hold best are the red hackle, the ginger hackle, the black hackle, oc-



Joseph Hirsch of Philadelphia is a member of the Pennsylvania Fish and Game Protective Association and for the third successive year he is President of the Middle Atlantic Association of Casting Clubs. This casting organization annually sponsors a casting tournament in which equipment is limited to regular practical fishing tackle.

casionally varied with bodies of gold or silver tinsel, the March Brown or dun drake, the pale yellow dun, and the blue dunboth very killing flies-the cowdung fly, the stone fly, alder fly, the green and grey drakes, and for twilight fishing, any of the grey, cream colored, or mealy moths. Of these, I prefer a large white winged moth with a black body. In many waters, some of the coppery golden and green peacock herls are found to kill well, and last season, 1848, nothing was so successful on Long Island as the Scarlet Ibis with a gold tinsel body. For my own fancy, however, I decidedly prefer the hackles of almost every color and variety, from the ginger, through all the shades of: cock, grouse, partridge, woodcock, up to jet black, and my favorite cast is a cochy bondhu, or soldier palmer for my stretcher, a ginger hackle or blue dun for my second, and a black palmer or dotteril hackle for my first dropper."

Frank Forester was one of the most prolific writers on outdoor subjects in his day, and his tragic and untimely end by suicide came as a deep shock to readers of his works throughout the Country.

In 1862, Robert B. Roosevelt, uncle of President Theodore Roosevelt, wrote his first book, "Game Fish of the Northern States and British Provinces." This book was more or less of a landmark, for it was the first work that treated on the subject of entomology, in so far as it concerned the fly fisher. Of the rod, Robert B. or Barnwell, has the following to say:

"Dr. Bethune, page 97, in "The Complete Angler," says, the rod should not exceed one pound in weight. Indeed it should not, and if it does, it exemplifies the old maxim, so far as to have a fool at one end. If we could fish by steam, a rod exceeding a pound and measuring over fourteen feet might answer well, but in these benighted days, while wrists are made of bone, muscles, cartilages and the like, the lighter the better. A rod, and if perfection is absolutely indispensable, a cedar rod of eleven or twelve feet, weighing nine or ten ounces, will catch trout. Cedar rods can only be obtained in America, and then only on compulsion, but this wood makes the most elastic rods in the world. They spring instantly to every motion of the hand, and never warp. They are delicate; the wood is, like woman, cross grained, but invaluable if carefully treated. The reel should be a simple click, never a multiplier, but large barrelled, and fastened to the butt with a leather strap. The line, silk covered with a preparation of oil, tapered if possible, at each end, and thirty to forty yards long." No mention is here made of any other type of rod, so it must be inferred that Phillippi's split bamboo, had not vet attained any degree of popularity—if it had, Roosevelt would undoubtedly have owned one, for he was considered quite wealthy, and a fanatic on modern equipment. Concerning flies, the following excerpt is most interesting, for he strongly condemns the hackles and palmers that had served the people so well before

"The May and stone flies are good, and of late years, a fly of mixed red and black, with wings, called by some, from his colors, the devil fly, has come into vogue. The palmers are only to be despised and avoided. In summer, the midges, the yellow sally, the alder fly, the little cinnamon, the black gnat, the black and red ants, and in fact all others.

are attractive. The water is then covered with myriads of many colored flies, and there is hardly any artificial but will find its representative among the real life."

From the above selection of flies, as well as those found in Frank Foresters "Fish and Fishing", it is apparent that both of themas well as those writers following-were influenced to a great extent, by patterns that were described and portrayed in English fishing books. Notable among such works might be mentioned, Alfred Ronalds, "Fly Fishers Entomology" 1836, the plates which were etched and water coloured by the author, and a work of art, that remains unsurpassed up to the present day. Another may be credited to William Scrope, Esq. whose "Days and Nights of Salmon Fishing" 1843, will live long as a great classic. Both of these volumes are in the authors collection and are among his most prized possessions. It is interesting to note, that both of the above writers, mention the style then in vogue, of attaching the reel on a belt



George Phillips, fisherman de luxe and fly tier of Alexandria, hooked and landed an 18 lb. 34 inch carp while fly fishing for bass on the opening day of the '43 season. After a forty-five minute give and take struggle the fish was beached from the Frakstown Branch of the Juniata. George is now on the Pacific coast in the Marine Corps.

around the body, and not on the rod—a practise whose attempted revival about four or five years ago proved short lived.

We now skip an interval of two years, and come to 1864, when Thaddeus Norris, a Philadelphian came out with "The American Anglers Book." This volume by the way, has been gaining every year in popularity, and is in a way a landmark, due to its accurate portrayal of the then existing conditions, and the homely philosophy of the author. Those of you who have failed to read the chapter on "The Angler's Sabbath," have missed something distinctly well worth while. Norris was a conservationist, and one of the best fishermen in the country. As a rod maker, he was unsurpassed, and the credit for making the first 3 piece all split

bamboo fly rod has been attributed to him. We must remember that up to this time, the butt joint had been made of ash. However in looking over Norris's book, little reference can be found concerning bamboo, from which we may conclude that the material had not yet come into common use. Norris advises that:

"For the lively tributaries of the Susquehanna, Delaware, and Hudson, the streams of New England, and for brook fishing generally, where wading is necessary, a rod from seven to nine ounces in weight, and from twelve, to twelve feet four inches long, is most suitable. A rod of this size is so light, that incessant casting does not weary one, and the size of the fish does not make a rod of greater power necessary. The butt of the fly rod, should be of well seasoned white ash, the middle joint of ironwood, and the tip of quartered and spliced bamboo.

"A small light reel that will hold twenty five yards of line is best for trout fishing. One with a short axle, which brings the plates of the reel close together, is to be preferred; as it winds the line more compactly on the spool.

"A plaited or twisted line of hair and silk, tapering for the last five or six yards, is by all odds the best for trout fishing.

"A leader should taper gradually from the end where it joins the line, to the end to which the stretcher fly is attached, and should be two thirds, or three fourths the length of the rod."

Unlike Roosevelt, Norris still clung to the hackle, and palmer flies that had been used so successfully in the past. He had the shrewdness to observe that: "the great desideratum would be, to keep the line wet and the flies dry. I have seen anglers succeed so well in their efforts to do this by the means just mentioned, and by whipping the moisture from their flies, that the stretcher and dropper would fall so lightly, and remain so long on the surface, that a fish would rise and deliberately take the fly before it sank.

"One instance of this kind is fresh in my memory; it occurred at a pool beneath the fall of a dam on the Willemock, at a low stage of water—none running over. The fish were shy and refused every fly I offered them, when my friend put on a Grannom for a stretcher, and a minute Jenny Spinner for a dropper. His leader was of the finest gut, and his flies fresh, and by cracking the moisture from them between each throw, he would lay them so lightly on the glassy surface, that a brace of trout would take them at almost every cast, and before they sank or were drawn away."

The above is undoubtedly the first known reference to dry fly fishing in America. How far have we traveled since this time!

It was probably a year or two after Norris wrote the "American Anglers Book," that he started to make the three piece split bamboo fly rod. That he was a master craftsman no one can deny. W. C. Prime, in "I Go A Fishing" 1873 says that: "The next two rods are facsimiles one of the other—a light seven ounce rod, twelve feet long, made with the utmost care by an experienced fisherman, each joint thoroughly tried, and the whole rod subjected to every proper test before it was regarded as complete. The tip bends to the butt, and flies back to a straight line. With one of these light rods, I have during five years use, killed

many hundred pounds of fish in Europe, Asia, Africa and America, and I would not part with either of them today for a hundred times its cost. They were made by Mr. Thaddeus Norris, of Philadelphia, an accomplished angler, and author of one of the best fishing books we have. These two rods are for all kinds of fly fishing, on: lake, river, or brook. I have one Norris rod lighter still for occasional use."

That these rods were tops, Prime illustrates by recounting another expedition taken on Diamond Pond, a small lake about a thousand feet in diameter, located near Colebrook, N. H. To quote Prime, the natives said that: "Our Norris rods would not lift a trout to the surface, much less out of the water. They forgot as most people do, that a dead fish is little if at all heavier than water, and does not need lifting to the top. The mysteries of a landing net are seldom understood by those who are accustomed to throw their fish over their heads on the end of a short line and long stiff rod. But your rods are too short. You cannot throw your fly far enough. If you fish Diamond Pond, you must have a rod fifteen feet long, and a line twelve feet at least. The trout are very shy there.' Reply: 'We can throw a fly seventy five feet with these rods.' Rejoinder: 'Incredulous smiles, and a murmur in the corner of the room that they are 'not so green in Colebrook' as we seemed to imagine."

To make a long story short, Prime and his companion DuPont, fished the pond together with a Frenchman and a native of Colebrook, and the catch they made that day was tremendous, many trout over a pound being taken, and all on the light Norris rods. The astonishment of the Frenchman and the Colebrook native can well be imagined! To

again quote Prime:

"Along the road home our Colebrook friend chanted the praises of light tackle, and in the evening the crowd in the hotel barroom looked with wonderment at the catch, and examined the rods, and lines, and flies alternately, and listened to the marvelous account of our companion, who clinched his stories with the bold assertion that 'while we were coasting down the north side of the lake, those two gentlemen were throwing their flies into the shadows on the south side, and pulling great trout clear across the pond."

But returning to Norris, it is fitting to mention that we native Pennsylvanians owe him a debt of gratitude, as he was instrumental in first transplanting black bass from the Potomac River into the Delaware near Easton. This occurred in the year 1865.

(To be Continued)

FARM PONDS

By SETH L. MYERS

Northwestern Pennsylvania Sportsmen

"If you want a 'thank you' job done in a hurry, give it to a busy man" has often been said, and usually the busy one will find time to take on a little more work.

There is a greater need for certain conservation measures now than ever before, because of the tremendous war drain on our natural resources. The one we have in mind is water; plain old-fashioned rain water. In the early spring we always have plenty, and more too. By mid-summer we begin to

worry about the dry spells. We worry about the farm crops and gardens. We worry about the food supply drying up, and during war time at least, that is truly something to worry about.

There are many other things to cause us great concern when those long dry spells set in. The streams dry up and kill off many fish which should be kept alive for children's pleasure as well as food. When the streams dry up it deprives the livestock of a fresh water supply, and makes it necessary for farmers to spend time hauling water for them which he could well use in tending his crops, which in turn is our food supply in the cities and towns. What is being done about it?

There is scarcely a farm but what has a small brook or spring run on it, and usually there is a spot of waste land or swamp suitable and located where it can be dammed.

It may not become the best of reservoir immediately, but within a reasonable time it can be made to hold a sufficient supply of water for all needs of the farm. The water will eventually become clear and fine for stocking with various kinds of fish. Every farmer through such a pond can have his own personal supply of fish for the table. He would likely be glad to issue sportsmen who would help him build the dam a life membership for fishing in it.

There are hundreds of spots of waste land all around us that are simply begging to become beautiful little lakes in their own rights.

If we can get the sportsmen to help the farmers build them, let us do it. If we need money to promote the plan, let us raise it. If we need an act of legislature, let us go to Harrisburg. Let us start plans for conserving the rain God gives us in the spring each year to be used when we need it each summer. A thousand more fish ponds will help in the current child delinquency problem, and many other ways worthwhile.

BAITS FOR STREAM FISHING

(Continued from page 13)

fingers at least without destroying the inhabitant thereof. Recognizing its strength the famous entomologist Dr. C. V. Riley years ago proposed that it be used commercially. But since the thread composing it is not continuous, as is the case with the silkworm cocoon, it can not be reeled for spinning. The bagworm when taken in the hand, tightly closes the opening in its case by means of its forefeet, but by gently pinching its tail it can be induced to protrude its head. By grasping this and giving a quick jerk its body may usually be pulled from the case. Sometimes however only the head is thus secured and the easiest method is to snip off the tail end of the case with scissors and drag forth the worm tail first. My custom is to gather these worms in a paper sack the mouth of which is then tied shut and placed in my fishing bag.

The insect grubs sometimes referred to by fisherman as "white worms," (Fig. 7) are the young of several kinds of scarabaeid beetles. The most common of these are the grubs of the May beetles or June bugs, frequently seen buzzing about the lights on warm spring or summer evenings. These grubs are to be sought under the sod of old pastures where they often kill wide areas

of the grass. They usually require about 3 years to reach full development but are large enough the second year for fishing purposes. Other kinds of similar grubs live in old manure piles while still others are found in the decaying stumps of trees. An especially white and desirable species lives in the stumps of pear and apple trees and the parent of which is the large brown or coffee colored beetle frequently observed feeding on the leaves of grape vines. None of these grubs when gathered in quantity for bait purposes should be thrown together without providing cover in which they may burrow. Otherwise they will bite and kill each other rapidly. Damp sawdust is useful for this purpose.

The big green tomato worms that bear a horn on the tail make excellent bait and in spite of their somewhat forbidding appearance are perfectly safe to handle. other useful bait worm somewhat better known is the catalpa caterpillar or "catawba worm" shown in figure 8. The fact that these often are found defoliating the umbrella catalpa tree within easy reach from the ground, renders them convenient to secure. A paper sack makes a convenient receptacle for them, and they usually are available during July at the height of the bass season. It should be understood that any of these large naked caterpillars are safe to handle and that only the hairy or spiny ones are poisonous.

The genuine utility of large caterpillars as bait for smallmouth was impressed on me last season by the following incident. After 6 weeks of severe drought, my partner and I sought the smallmouth bass in some of the tributaries of the Rappahannock in eastern Virginia. Here, in early July we had unexpectedly, at the tail end of a fruitless trouting trek, found some wonderful bass But now, these streams in most places had become reduced to mere trickles connecting deep almost stagnant pools. As we drove, hither and yon, seeking live water in which the bass might be active, I spied on the floor boards of a bridge a huge horn tail caterpillar which I placed in my fishing sack for future reference. Coming. at long last, to one fairly likely stretch of stream showing a few deep runs and good riffles we proceeded to whip this hopefully and industriously with flies for hours, but without results. Then, yielding to my usual reaction under such conditions, I sought and finally found a single lusty helgrammite and cast it into a promising riffle only to have it promptly mauled and killed by a big river chub which I addressed in most impolite terms. Then remembering the big caterpillar I impaled this on part of my hook and eased it into the head of a deep narrow run under some willows where it sank like a lump of lead but drifted along the bottom, presently stopping at my very feet. Upon attempting to lift it clear it seemed snagged to the bottom. I jerked at it tentatively when behold, the line began sawing around up and down the stream in a most refreshing manner, finally convincing my incredibility that a game fish was at last fast to my line. After an excellent exhibition of submarine tricks it was brought to the surface and proved to be a 2 pound smallmouth in excellent condition. The sole satisfying fish resulting from two days of persistent easting in Piedmontane

puddles.



Hackle and hair on fly rod surface lures give them lively action without which they would not catch fish. Keep this in mind when buying such lures. See that they have plenty of adornments that will make them look alive when they are cast and retrieved.

Shoes used for wading should never be dried in the sun, for this will cause them to crack and rot. Spread them as far open as is possible and put them in a shady place where the air can get to them. Even leaving them inside the trunk of the car is better than standing them where the hot sun will beat on them while they are still wet.

It's our opinion that squeezing an undersized fish to keep a grip on it with wet hands kills more fish than does rubbing off a few scales in the process of releasing the fish gently with dry hands.

A fish that bleeds slightly, perhaps from the wound of a hook, can often be returned to the water with fair assurance that it will live. But any fish that has suffered a gill injury is doomed to die.

The green, moss-like stuff you have cussed along a trout or bass stream is what makes your fishing possible. It is called algae, and on it large stream insects (which fish devour) grow fat. Algae is a minute form of plant life, and without it no stream is really able to support abundant fish life.

The leader should be at least 4X, and 5X is even better, when using wet or dry flies as small as Size 18.

Trousers with cuffs are poor things for wading. They catch and hold sand and gravel and when wet sag down over the heels. If the pants are old enough for wading, it won't hurt them to cut off the bottom six inches of each leg.

A greased line that floats well makes wet fly fishing easier unless the water is unusually broken or the current more than ordinarily fast. For one thing, the movements of the floating line can be watched for the first sign of a striking fish that cannot be felt.

There are a number of ways to interest trout in an artificial lure when the fish are rising freely to a generous hatch, but any of them includes the likelihood that the fish will not happen to take the artificial, no matter how ably it is presented, in the midst of all the naturals. The proper procedure is to select one rising fish and keep casting the fly to it. That may take time, but it is a fascinating and nerve-testing

In dry fly fishing, do not be too hasty in picking the fly up off the water. Rather, let it float as long as it will, for even a cast that looks poor or that has failed to go to the desired spot may attract a nice fish that would be badly frightened by an abrupt picking up of the line, leader, and

Brawling currents are poor places in which to try fishing with the dry fly, for trout feed most of the time beneath the surface of such areas. They are ideal spots, therefore, for angling with wet flies, streamers, and nymphs.

Getting a worm into a pool by casting it like you would a fly often results in tearing the garden hackle off the hook. If water conditions are suitable, you can avoid this mishap by using a long rod and drop rather than cast the worm. Spot-fishing, it is called.

Suggestions for the beginner at fly fishing: For dry flies, acquire a size range from 10 to 16, with the bulk in sizes 12 and 14;

for wet flies, a size range from 6 to 14 is advised, with Size 12 in the majority.

Wade when fishing only when it is absolutely necessary. Fish from shore when it is possible to do so, and when this method is out of the question, then wade as closely as possible to the shore from which you are casting. Fish are keenly aware of the vibrations resulting from human feet moving on the bed of a stream. Even hard-packed sand will transmit such disturbances.

There are more than 600 different patterns of trout flies, but don't let that fact worry you. Color is the thing. Have a selection of flies in ginger, brown, gray, badger, white and black, and you will be prepared to catch trout under almost any circumstances, provided of course the flies approximate in size and general shape the natural insects upon which the trout are feeding.

Many anglers have vexing difficulty simply because they use leaders that are too light at the butt end, where they are fastened to the line. The lighter the butt, the harder it is to straighten out the leader in the cast. The ideal is a leader about half the diameter of the end of the line to which it is attached.

Pike 'Tagged' in 1939

Ann Arbor, Mich.—(UP.)—A northern pike, tagged April 26, 1939, and caught recently by an ice fisherman in the north bay of Houghten lake, was found to have grown 14.4 inches and gained 7 pounds, 11 ounces in the intervening four years, the state conservation department reports.

The pike was found not far from the spot where it had been tagged. The fish was one of 300 wild northern pike tagged on the jaw by the department during the 1939 spring spawning run.

The tagging experiments were begun in 1939 to obtain information on the spawning habits, growth rate, and feeding habits and migration of fish to improve fishing.

FISHING LEADS TO GREATNESS?

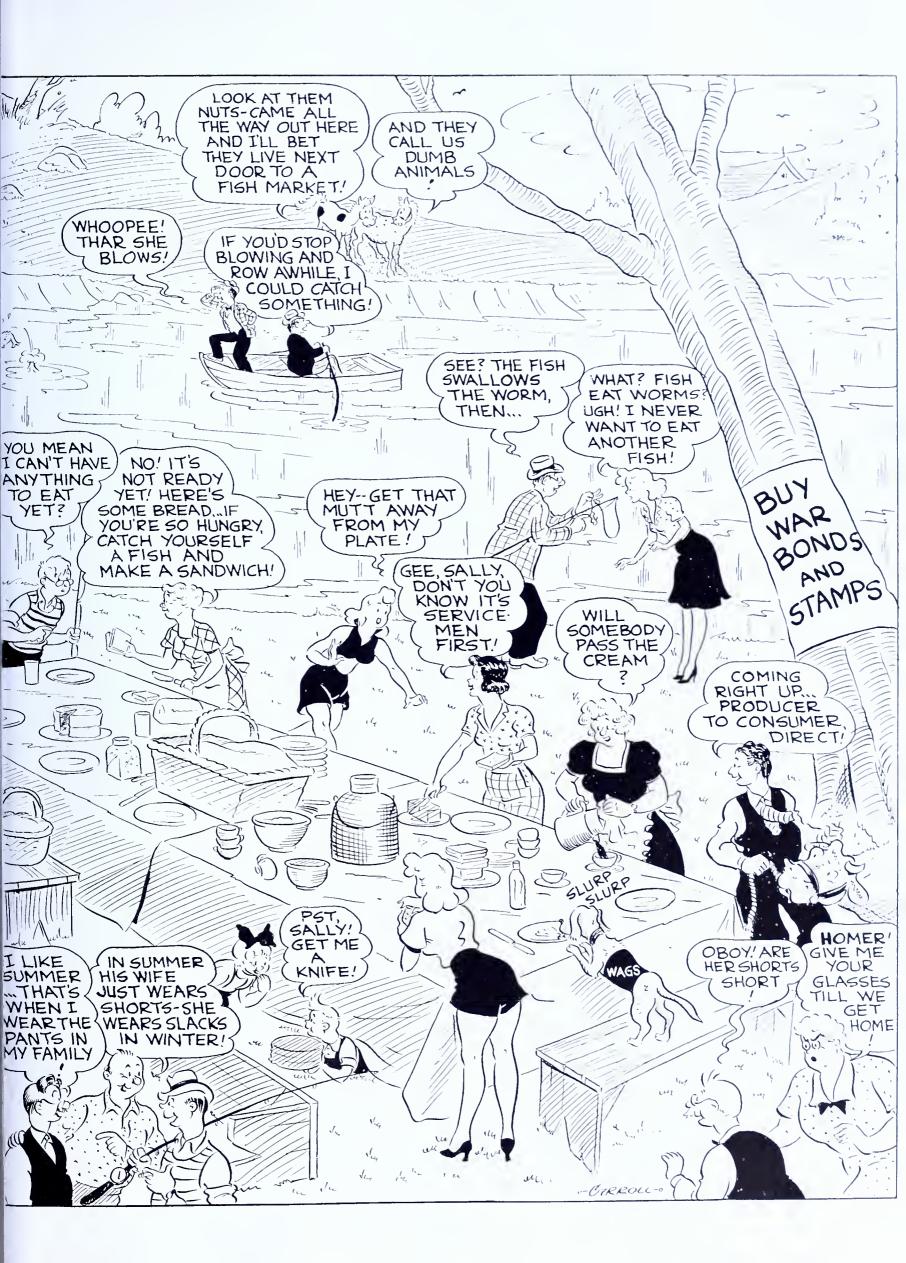
By MERION LOWER

Most really big men all seem to come from the ranks of the rural or small-town Americans. Perhaps this is so because these boys have to learn to work hard very young, or perhaps it is because they have had more opportunity to spend a lot of time fishing, which leads to contemplation, which leads to thinking of the serious things of life. The association with streams, brooks, rivers and oceans always leads to aquatic sports, and so the young boy learns to swim at the same age he learns to fish. When the exigencies of war arise, these fellows feel right at home with a fox-hole shovel or a pick, a motor truck or a jeep, in the water or on the field, in fact, they are better soldiers than the city-raised youth in many ways.

We can all improve our physical and mental selves by taking heed to the call of Mother Nature when she beckons to us in the spring to enter into the worth while pleasures of out-of-door recreation and work. Victory gardens, fishing, hiking, golf, tennis, swimming, in fact just sitting in the

warm sun is something that will help us all after a long winter of war and work. -Ardmore Chronicle.

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Success

We often hear of a case where boys
Just somehow go astray

And end in the courtroom where the Judge
And the law must have their say.

And we often find, in a case like this,
That the boy has never had

The fun of a weekend fishing trip
In the country with his dad.

We all have hopes of achieving wealth
As we live from day to day
And it's true that we'll gladly spend more time
At our work for higher pay.
But who is so vain to even think
That a wage increase brings joy
To those involved in a courtroom scene
With a small neglected boy?

There are many ways to succeed in life.

All success is not the size

Of your bank account or your pocket book

Or the cost of your shirts and ties.

It seems to me that the true success

Is achieved by the man who takes

A certain amount of his time for trips

With his son to the streams and lakes.

When you hear of another courtroom case,
 Then you feel that another man
Has somehow failed to achieve success
 Irrespective of his plan.
When you see a father who takes his son
 Out there to the fishing hole
You somehow feel that this father knows
 True success is quite a goal.

BERT PRUITT

Reprinted from Ohio Conservation Bulletin.

TAKE A BOY FISHING

Pass Along Your Angling Secrets To a Youngster; Teach Him To Be Tomorrow's Sportsman, and Enjoy His Pleasure in the Outdoors

By DICK FORTNEY

"Wow!"

"Oh, boy!"

"Golly, what fun!"

"You should feel this baby pull!"

The torrent of words came out of the pitch black night, poured from the lips of a very young and very enthusiastic fisherman standing up to his middle in a fine pool of a bass creek.

The lad was being initiated into the ancient rites of night bass angling. This was the grand climax of an experiment that had started out uncertainly, gained favor as it went along, and now had us completely sold on the idea of taking a youngster fishing.

We're convinced that we should have done it sooner, but our tardiness can be excused on the ground that neither Brooks nor I have a son. So it just hadn't occurred to us that some youngster might enjoy a fishing trip with us.

Bobby, our young friend, was only 13 years old. He wasn't exactly an amateur fisherman, but he had confined his angling largely to a couple of small trout brooks in the vicinity of a farm where he spent his summers. He knew nothing at all about using artificial lures for bass, and certainly nothing of night fishing.

Bobby lived in the city in an apartment next to the garage Brooks owns. He happened in one evening just after Brooks and I had returned from an afternoon of angling with a nice catch to display. The lad almost lovingly stroked the sides of the biggest bass.

Then from his lips poured a torrent of questions about where we had fished, what kind of bait or fly we had used, and what kind of a battle the hooked fish had fought.

The idea hit Brooks and me at the same minute.

In one voice we promised: "The next time we go, Bobby, we're going to take you along."

The lad proved to be a perfect companion. He did his share of the chores, he fished industriously and with vast enthusiasm.

He understood quickly when I explained to him the technique of fishing with a small surface lure in the dark of night, and when it came time to fish I sat myself on a fallen log along the shore and told Bobby to do his stuff.

The youngster had a whale of a time. His first cast produced a belligerent rockbass that put up quite a scrap, considering its size, which he carefully returned to the water after he had removed the hook.

I'll swear that Bobby caught 20 or 30 fish in the next hour. The way he carried on, its a wonder all the bass in the pool were not frightened out of their wits. But they kept on striking and running and leaping, despite his noisy outbursts.

The first lure, a bug made with a small cork body and wings and tail of black squirrel hair, soon wore out. The dressing fell apart, and the body wobbled on the

hook. I gave Bobby a second lure, and he used it until the bass quit feeding (or had all been hooked), and about all of that second lure that could be salvaged was the hook.

Brooks and I always will remember that particular trip not so much for the fish we ourselves caught as for the pleasure that we derived from the presence of Bobby.

He didn't utter one word of complaint during the whole trip—even when during the afternoon he couldn't get a strike although he concentrated so much on his fishing we had to call him three times for supper. He kept calm and cheerful—even when he waded out into the creek and grabbed a big swimming water snake, and the reptile bit him in the right thumb.

He was so tuckered out we had to shake him to arouse him when we stopped at his home around midnight after a long ride home—but he didn't forget to tell us what a fine time he had and to thank us for "bothering" with him, to use his own word.

Since that day Brooks and I have been convinced that the most worthwhile item of "tackle" that any angler can add to his kit is an enthusiastic boy—his own or somebody else's son.

I have a lot of admiration for the angler who, invited to accompany a friend to a trout or bass stream, has the courage to ask:

"Do you mind if I bring Junior along?"

And I trust that the angler who turns down such a request will catch nothing but horny chubs the rest of his life.

What do fishermen expect to do with the angling lore they have acquired?

Who do they think will take care of their beloved streams when they have grown too old for fishing?

Do they suppose any youngster will sit down and read books to find out what kind of tackle to use, and when and where and how?

Doesn't every man grow weary of the cynical talk of other men and long for contact with the unselfish personality of youth?

These are questions worth pondering. And the answer to every one of them lies in the simple act of taking a boy fishing. You see, it works both ways. You get a lot of pleasure out of playing host to a youngster, and he has the time of his life.

I have a friend whose son last year attained the proper age and size to go on some trout fishing trips with us. The lad didn't travel around much. He usually found a nice pool, seated himself comfortably, and did some still-fishing while the rest of us roamed the stream.

One afternoon I happened to return ahead of the other fellows to the spot where we had parked the car. There sat the boy on a flat rock in the shade of a hemlock. His



The youngster had a whale of a time. His first cast produced a belligerent rockbass.

(Continued on page 15)

FARM FISH PONDS AND THEIR MANAGEMENT

Prepared by Fish and Wildlife Service

Location and Construction of Farm Ponds

ARM fish ponds are usually developed where a continuous flow of water can be diverted from an adjacent stream. An ideal location is on bottom land that is not subject to flooding. Ponds formed by simply damming a stream are ordinarily not successful, as it is difficult to control the flow of water and the pond may be damaged by floods. In such ponds it is almost impossible to prevent the escape of large numbers of fish. However, ponds may be constructed on spring runs not subject to severe floods or where storm waters can be by-passed. In general, the most successful ponds are those which receive only enough water to maintain a constant level with little overflow.

While flowing water is very desirable, it is not absolutely essential. In localities where the subsoil is naturally impervious, ponds supplied only by runoff from the adjacent land may be successfully operated. Since such ponds depend directly on the rainfall, there is considerable fluctuation in the water level and they may become dangerously low during dry periods. Ponds of this type are said to require from 10 to 50 acres of watershed for each acre of pond.

Farm ponds vary widely in size, in accordance with topography and water supply. Small ponds of about 1 to 3 acres are to be preferred, being both more productive and easier to control. Good fishing can be produced in fertilized ponds as small as one-half acre.

Shallow ponds are best, with approximately two-thirds of the area between 18 and 36 inches deep and a maximum depth of 6 to 8 feet. If there is considerable fluctuation in the water level, these depths should be increased. If possible, the pond should be so constructed that it can be drained easily and quickly. This may add considerably to the cost of construction, but it is believed that advantages in operation will more than compensate for the additional expense.

Stocking Farm Ponds

The proper number and species of fishes with which to stock a farm pond is a different problem for each pond. The number that can be stocked to produce fish of edible size within a year depends on the natural productive capacity of the pond and upon fertilization. Much greater production and better control of conditions are possible in fertilized ponds. Higher production can also be expected in the South, than in the North, because the growing season is longer and water temperatures are higher through the year.

Apparently the two most suitable species for stocking in farm ponds are the bluegill sunfish (Lepomis macrochirus) and the largemouth black bass (Huro salmoides). The first, besides being an excellent pan fish, spawns throughout the summer and produces numerous young upon which the bass feed, and therefore, grow rapidly. Bluegill sunfish spawn when only a year old and multiply very rapidly. As a result, the pond

quickly becomes over populated unless a predaciores such as the bass is present to prey on the young. Bluegills are efficient utilizers of the natural food supply in the pond and should reach a size suitable for human food within 7 to 12 months after stocking. Experiments indicate that the largemouth black bass is a better fish for maintaining a proper balance in ponds than the smallmouth, which is less carnivorous. Another advantage of the largemouth bass over the smallmouth bass is that it spawns readily in the shallows of ordinary ponds, whereas the smallmouth prefers gravel beds.

Investigation at the Leetown, West Virginia, experimental station indicates that in fertilized ponds, best results can be obtained by stocking 800 to 1,000 fingerling bluegill sunfish and 100 bass per acre. The same proportion has been found suitable in a recent study of five Florida lakes which in natural condition showed a ratio of 1 pound of predator fish to 2.6 pounds of supporting fish. This is equivalent to approximately 1,050 bluegill sunfish to 100 largemouth black bass of legal size. It appears, therefore, that the balanced ratio of the two fishes is about the same in fertilized and unfertilized waters. The latter should, however, be stocked less heavily, only about half as many fish being used, depending on the natural productivity of the ponds. It is recommended that the unfertiliized farm pond should be stocked with not more than 500 bluegill sunfish fingerlings and 50 largemouth bass per acre.

Both may be introduced at the same time, or the sunfish may be stocked in the fall and the bass early the following spring. Observations in the Southeast indicate that late delivery of bass (that is, after June 1) may result in over-populations of bluegills, because the bluegills start to spawn very early and when free from predation increase rapidly. At the beginning, however, all fingerling fish planted should be as uniform as possible in size.

A newly-stocked pond should have the outlets screened to prevent escape of the fish.

Although the white crappie (Pomoxis annularis) and black crappie (Pomoxis sparoides) have been tried in farm ponds, they tend to disappear, because they cannot compete successfully with largemouth bass and bluegill sunfish. Bennet in reporting on Illinois lakes, stated that there are marked fluctuations in the production of bass and crappie where the two are stocked together. Small bass populations are associated with large crappie populations and vice versa, probably because of competition for the same foods.

Minnows are not recommended for small pends where the maximum of food fishes is to be produced. In the study of Florida lakes earlier cited, the ratio of predator to non-predator fishes was about constant from lake to lake, yet the amount of non-edible was larger than that of edible fish in some lakes. Bennet found the same condition prevailing in Illinois lakes.

If bullheads or catfish are desired in the

farm pond, the brown bullhead (Ameiurus nebulosus) or the yellow bullhead (Ameiurus natalis) may be stocked at the rate of 100 per acre. These bottom feeders although omnivorous apparently compete but little with bluegill sunfish and bass for food. They are prolific and their young are readily consumed by largemouth bass. In experimental ponds at the Leetown, West Virginia, station brown bullheads stocked with bass and bluegills reached a length of 11.3 inches within a year after stocking. At the same time, largemouth bass in the pond averaged 10.3 inches in length, and bluegill sunfish 6.1 inches.

The greatest danger, in fish pond management, aside from neglecting to fertilize properly, is in overstocking. It cannot be emphasized too strongly that adding fishes beyond the recommended number, in the hope that fishing will be improved or brought about more quickly, is a fallacy. The overpopulations thus created will result in stunted fishes and poor fishing.

Fertilization of Farm Ponds

Every farmer knows that land crops require proper fertilization to produce maximum yields, but it is not generally understood that ponds must also be fertilized if best results are to be obtained. Dense growths of rooted vegetation and thick scums of algae on the surface of ponds are objectionable since they reduce the productivity of the pond and make it difficult or impossible to fish. They can, however, be controlled by the proper use of fertilizers.

Fertilization should be begun during the first warm weather of spring and should be continued through the summer and early fall. In the far South it may be advisable to fertilize at four-week intervals through the winter.

It is believed that, in general, inorganic are preferable to organic fertilizers as barnyard manure, cottonseed meal, and soybean meal. The same fertilizer cannot be recommended everywhere for waters differ widely with respect to materials carried in solution.

The object is to supply enough nutrient in the pond to result in turbidity that will prevent seeing the bottom at depths of more than 10 to 12 inches. This turbidity is caused by microscopic plant growth which gives the water a green or brown tinge. If the pond is over-fertilized, a heavier microscopic plant growth will be produced which will give the water the appearance of pea soup. This is detrimental to fish life in that the oxygen content of the water is reduced. At the same time, if the water does not become turbid enough to exclude light, rooted vegetation will flourish.

Control of Weeds

If, despite fertilization, rooted plants or floating patches of pond scum continue to grow, they should be eliminated as soon as possible, as they utilize the nutrients supplied by fertilizers that are intended to increase fish production. It is probable that

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MEMORY CREEL

By SAMUEL WEITZ

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T HE sportsman who can enjoy a day's fishing and bring pictures of the trip home with him, as well as a full creel-has something on the ball that few ordinary anglers have. He enjoys the foremost hobbies of the twentieth century . . photography and fishing. Actually a hobby within a hobby.

An investment of two dollars at the age of twelve has paid me big dividends in the way of added pleasure, to nearly every form of recreation I have enjoyed. I bought a

It was just one of those simple fixed focus outfits that you pointed and snapped, but it



Sam Weitz, the author, is a conservationist, angler and photographer. He wets a line in French Creek.

did the job. To make a record picture, one doesn't need much technical knowledge. Adhere to the elementary principles of photography, and you will find most any kind of a camera will register a satisfactory .snap-shot.

With a slight effort at composition and the mere click of the shutter, you can bring back beautiful scenes that years ago required the skill and soul of an artist. Get all the fun you can from this fascinating hobby and later, as years go by, the company of your photo-album will more than compensate you for the time, effort, and expense devoted to it.

Those who have never developed their own pictures have a surprise in store for them. This phase of photography will be found to be more fascinating than the actual taking of the picture. Long winter nights will never be dull, if you get into the art of developing and printing your own nega-

Start in a small way and add to your equipment gradually. Too many amateurs try to begin at the top and soon get discouraged. The advice of an experienced

photographer when you attempt your first developing, will help avoid many pitfalls. If there is a photographic club in your town, by all means join. There, you will meet lots of advanced workers who will gladly assist you with your problems.

For years, I did all of my laboratory work at a photo club, until the heating plant of my house was converted from coal to fuel oil. The elimination of the coal bin gave me the urge to make my own darkroom. I had but a limited knowledge of tools and how to use them, but soon learned. Instead of the usual two by four laboratory, I planned to make the entire basement lightproof.

The coal bin was previously located under an open porch. Therefore to keep even temperatures, I lined the walls and ceiling with one half inch insulation boards. As a result, I have never had a failure in developing of films due to the summer heat. Since the front window was irregular in shape, a frame was made to fit snug and then covered with wall board. Double protection against light penetration, was provided by nailing two inch lattice strips to the wall making a grooved track, on which a piece of pressed wood can be raised and lowered at will. A small hole was drilled into each of the strips and when the board is raised, a couple of nails inserted in the holes keep it in place. The rear door leading into the laundry room was weather-stripped and the window permanently covered with wall board.

By making the workship light-proof, I eliminated the necessity of painting the walls black. Pure white walls with a light green trim, gives me a pleasant and cheerful place to do my work. A variety of safe lamps of the proper type, give ample protection for the developing of films and paper.

Another advantage of a cheerful workshop is, that it can be used for a studio as well as a darkroom. Three large reflectors fastened close to the ceiling and equipped with number two photo-floods, contribute to the main lighting of my studio. Deflectors are used on these lights, making it easier on the eyes of the subject and distributes an even flow of light. A modeling light with a number two bulb clamped on to a movable stand and a spot light for glamour pictures, completes the lighting arrangement. A white shade on a six foot curtain roller, provides an excellent back drop.

Of course, where no light can penetrate from the outside, the reverse is also true. Therefore, my combination studio-darkroom has been a comfortable haven during practice blackouts, which have taken many of us by surprise during the past two years. I have even taken pictures during a blackout. Why not? The photo of David Stybel, published in the July 1943 issue of the Pennsylvania ANGLER, was taken during an alert. We had just arrived home from a fishing trip, when the sirens screeched their warning of a blackout. The picture taken with artificial light, is an example of good composition and light control.

Frequently some of my friends of the Dover Fishing Club come over and spend the evening in my "hobby room." We talk over fishing trips, tell a few tall stories, argue about our pet lures and finally wind up by taking a few pictures. I have portraits of most of my angler friends taken in my home studio, that will always recall memories of good fellowship usually found among men who fish.

JULY

My greatest pleasure is looking through the old photo-album and re-living "those good old days." I get a big kick out of the picture of the beach-queen with her gay parasol, wearing a spiffy bloomer bathing



George Ellis, Sr., prominent Philadelphia con-servationist and contributor to the Angler, is a companion of Sam Weitz. Photo made in the basement studio of the writer.

suit, which in those days was quite daring, and captured many an admiring glance from the Beau Brummel with his long-sleeved jersey and knee-length trunks.

The one picture however, that is outstanding in all this group of recollections, and the one which I turn to most frequently -is a simple little snap-shot of a "five and a half pound bronze-back." The memories brought back every time I view this ancient photograph, gives me an emotional sensation that is second only to the thrill I got out of the incident that led to the taking of the picture.

While in the waiting room of a railroad station in New York City, I picked up a circular, advertising Lake Hopatcong as a "fisherman's paradise." What disciple of Izaak Walton could ever resist such a build up? I fell for it, like a trout falls for a May fly! Stan Root fell just as hard when I told him! We immediately planned a two weeks vacation at this summer resort in the mountains of North Jersey.

A few days later found us comfortably situated in a cabin overlooking the lake. After stocking the pantry and completing the



Easton Bristol Canal, a quarter of a century ago. (Ed. note. This is probably the finest photograph of the historic old canal.)



Charles E. Boardman, typical sport loving young American, is looking forward to the day when he can once again fish for bass and hunt

usual camp chores, Stan proposed a canoe ride to look the place over and to take some pictures. And I . . . well I was there to fish. So, I took my rod along. It's a good thing I did!

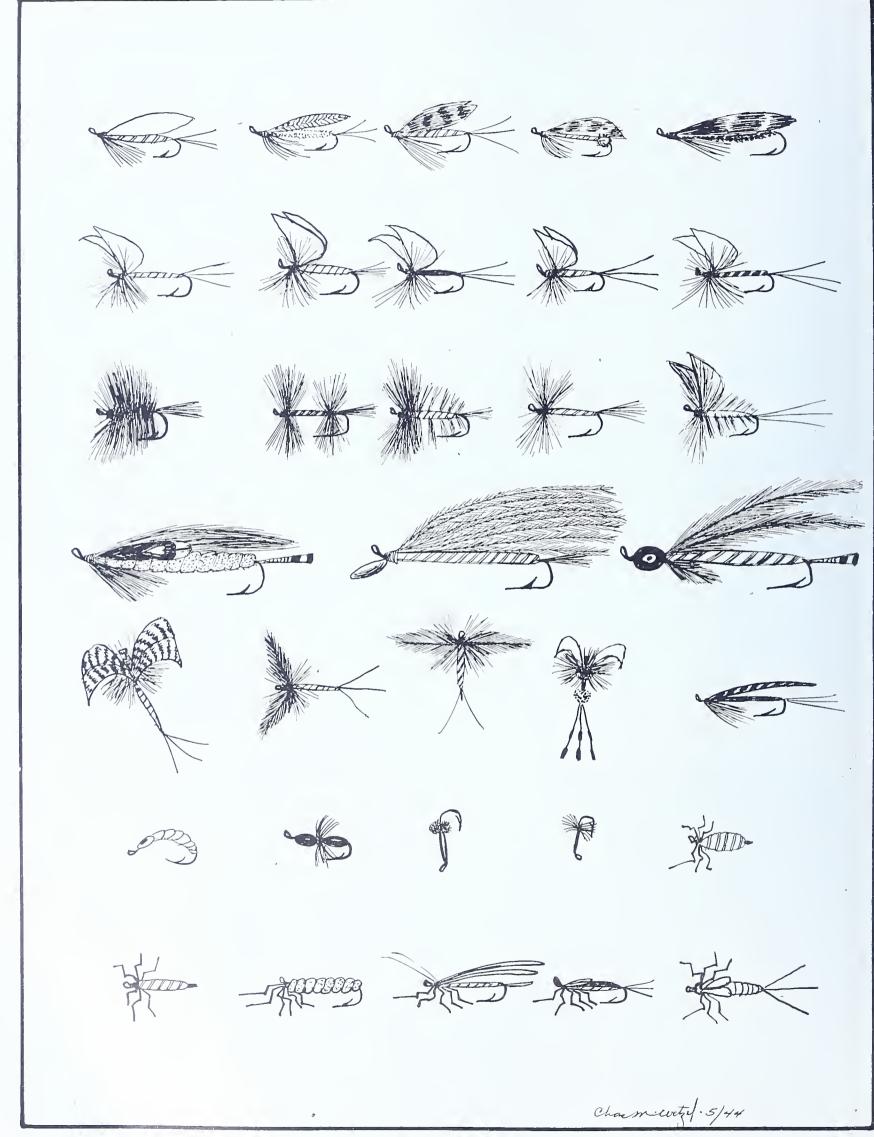
We paddled but a short distance, when we came upon some lily pads along the rock strewn shore, a perfect cover for bass. Silently I laid the paddle down and reached for the rod. The lure selected was a monstrosity known in those days as a "Decker Bait," which Stan nicknamed "Steamboat Bill." Old timers will remember this plug, as one of the first to feature the noise principle for attracting game fish. It measured four and a half inches in length and weighed approximately one ounce. The front end was on a shaft and attached to it were two large blades, which caused this part of the lure to revolve when retrieved.

It is interesting to note the novel method of attaching the single hooks to this "killer-diller." A stout linen line was tied to the eye of each hook and fastened to the plug so that it dangled about one half inch from the body. The limp manner in which they hung, eliminated any leverage to assist the struggling fish to throw the lure.

Stan was intrigued with the construction



There will be more like this in the Susque-



Modern Trout Flies

DEVELOPMENT OF FLY FISHING IN AMERICA

By CHAS. M. WETZEL

PART II (Conclusion)

IN THE year 1865, Robert B. Roosevelt to the fineness of the gut leader. If this author of "Game Fishes of the Northern can be obtained, no other should be thought States and British Provinces," came out with another book entitled "Superior Fishing." From it, one infers that Robert B. or Barnwell still clung to his cedar fishing rod, but he makes mention of a rod of split bamboo throughout, which was used in one of the first fly casting tournaments to be held in this country. Speculation as to the actual length which a fly could be cast had been mounting daily, for just prior to that time, Mr. Seth Green-one of New York's best fly casters and a noted fish culturist-was awarded a certificate for casting the almost unbelievable distance of one hundred feet.

The contest was held in New York in 1864, at the convention of the New York Sportsmen's Clubs, when a handsome prize was offered for excellence in casting the fly. "No rod was admitted that exceeded twelve feet six inches in length, or that weighed over one pound; and gut leaders of not less than eight feet were required, and to this three flies were to be attached. The rods used were respectively of ash, with a split bameboo tip; of cedar with a lancewood tip; and of split bamboo throughout; and were all of the best workmanship and of perfect representations of their kind; the contestants were some of the best anglers of the state, and nothing occurred to mar the pleasure of the contest, or to disparage the correctness of the award. The prize was won by the cedar rod, which was twelve feet three and one-half inches long; and weighed with heavy mountings, fourteen ounces; and the greatest distance cast with the right hand was sixty-three feet, although the allowance carried the official return to sixty-eight feet; and with the left hand, the absolute distance was fifty-seven feet."

Barnwell does not mention the name of the successful contestant, but considering his almost all along championing the merits of the cedar rod, one strongly suspicions that he may have been the winner.

From the above account, we here have definite proof, that rods of split bamboo construction throughout, were in use as early as 1864. It is also a matter of interest to note that Seth Green was later vindicated, when it was officially confirmed that his disputed cast of one hundred feet was correct. He had a rod and line especially prepared for casting a great distance, and not for ordinary fishing.

With the advent of the all split bamboo fishing rods, we must here take note of another recent development, that is, the matter of lines. It will be remembered that up until this time, fly lines made of horse hair, and also of silk and hair, were eonsidered the last word; and before closing this account from "Superior Fishing," we must give Roosevelt credit for coming out with the bold and positive assertion that: "The best line by far, for both salmon and trout fishing, is the braided silk covered with a waterproof preparation, and tapered

of, but if it cannot, the others are about on a disgraceful par of mediocrity; the one that is usually praised, that of silk and horsehair mixed, being, if possible, the worst, for while it has the weakness of the horse hair, and water soaking capacity of the silk, it has a difficulty especially its own, arising from the protusion of short ends of hair that have broken or rotted off, and which are continually catching the rings or guides.'

Here definitely we note a turning point, or the beginning of a new cycle, in the development of American fly fishing. The first was Thad Norris's, account of the dry fly struggling to appear on the water in 1864; the second, the development of the all split bamboo fly rod; and the third, the advent of the braided silk waterproof line, all around the same time. No material progress had as yet been made in the study of artificial flies, insofar as copying the dressings of those natural insects that frequent the water. Entomology in America was almost unheard of, that is by fly fishers; and all past angling writers copied and recommended those wet flies as described in English fishing books. Examples of this can be found in Roosevelt's book, wherein such salmon and trout flies as "Meg with the Muckle Mouth," "Kinmont Willie," "March Brown," "Cowdung" etc., were credited to Scropes, "Days and Nights of Salmon Fishing," and Ronalds "Fly Fishers Entomology." But were we wrong in using these artificial trout flies with their English prototypes? Would the fly fishers who practiced their art, back around the Civil War days, have had better luck if they had eopied and imitated our own American insects? Perhaps, but this writer believes not, and he bases his conclusions on the following.

Ronald's work especially was a work of art. No better flies, both natural and artificial, have ever been drawn, and perhaps never will be; the natural insects appear as if to take to flight from the pages; they were copied from insects that frequented such rivers as the Dove, and Derbyshire waters, streams that harbored insect life comparable with that found in the majority of our American waters. And the flies do not differ so radically from those found here. True, the Alder is much smaller and blacker, but offsetting this and a few others, we find the Green Drake, Grey Drake, Black Drake, March Brown, Red Spinner, Golden Dun Midge, Stone Fly, Grannom, Iron Blue Dun, Jenny Spinner, Yellow May Dun, Yellow Sally, Dark Mackerel, Pale Evening Dun, Golden Eyed Gauze Wing, Red Ant, Silver Horns, Willow and a number of others, that very closely imitate our own American insects. The generic and specific names given to these insects in Ronald's 1850 edition, do not even approximate our own, but after all, what are generic and specific names, when the pictures speak for themselves? When entomologists place a fly in a certain category, it is often allocated there by certain minute characteristics, which require a glass or a genatalic slide to identify; and we all know that trout are not thus equipped, neither could they distinguish such small differences that exist between certain English and American flies. Perhaps unknowingly many of our old timers were using artificials, whose prototypes so closely resembled their English cousins, that it would have taken an entomologist to separate them. At least they caught trout with the English artificials, entirely too many considering the present day scarcity.

Before proceeding further, it must be pointed out that with the beginning of the new cycle in fly fishing, progess advanced very slowly. In fact a period of approximately fifty years elapsed before the dry fly was well on the water; and the same length of time proved necessary to convince the die hards, and those living in remote and inaccessible places of the merits of the light split bamboo fly rod, and the braided silk waterproof line. This intervening period of approximately fifty years between cycles, will be sketched over rather briefly, not that it was without interest, but rather because it was a period of readjustment, and steady improvement, yet lacking any marked or historical developments.

In 1869, Genio C. Scott, a New York publisher of fashion plates, a skilled fisherman, and later one of the promoters of Pike County's Blooming Grove Park Association, came out with a book entitled "Fishing in American Waters." This book is more or less of a miscellaneous nature, but in it are various observations that appear worthy of thought, as evidenced by the following: 'While I believe that trout are not generally so discriminating in the selection of artificial flies, as to evince acuteness of vision, yet I have experienced that at certain waters, when the streams are low and clear, a copy of the living fly is more or less necessary to success." The writer believes that if Mr. Scott was fishing the highly educated brown trout of today, the above statement would no doubt be couched in far more positive terms. Scott mentions that "Rods made from splitt bamboo are unquestionably the best in use; but a Robert Welch rod, of ash for the butt and second joint, laneewood for the third, and split bamboo for the fourth or top joint, is the best rod that I have ever owned for general fishing.'

Charles Hallock, founder and editor of Forest and Stream strongly recommends an Andrew Clerke split bamboo fly rod, in his book, "The Fishing Tourist," 1873. Andrew Clerk & Co., were agents for the split bamboo fly rod manufactured by Samuel Phillippi-the pioncer who was credited with making the first split bamboo fly rod back in 1845. Hallock states that: "single handed trout rods of split bamboo measure eleven and one-half feet, and weigh from 6 to 8 ounces." Of particular interest to Pennsyl-

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ACES UP

Fishing The Midget Spinner

By E. LLOYD KING

HEREABOUTS varied methods are employed in fishing the Midget Spinner. Interesting adjustments, replacements or refinements are tried on the hooks and hardware in general. Mostly we consider the lure particularly adapted to the big water, of the Susquehanna and the Juniata, particularly the tumbling ledge riffles and the deep, fast water rock-studded channels, also discolored or broken water on the big creeks. Just as positively ½ oz. seems rather heavy on the shallow, smooth, overworked creek flats and weed beds, especially thereon in clear midseason and autumnal water does the lure appear to be under a decided handicap. Apparently too much landing splash or disturbance for over-cautious big smallmouths!

Getting the plug on the water rates most important. A lot has been said and written about the silent dive cast. Most successful big-bass pluggers use this cast or a personally workable adaption thereof, many no doubt without recognizing the specialized approach. Charlie Fox described the silent dive cast most aptly on the pages of this magazine some months ago. Briefly the routine consists of abruptly stopping the flight of the plug with thumb pressure, lifting the rod tip a bit upward and prior to lure contact with the water, then if not a southpaw, sharply swinging the rod tip around, down and to the right. The procedure serving to get the bait on the water with the lightest possible disturbance and then diving it immediately and naturally! Of all the favorite plugs, with myself at least, the silent dive approach rates most important while tossing the Midget Spinner. Generally and most interesting, however, if the strike does not come directly upon impact or within ten feet thereafter, just begin planning the next toss. Not always though, and hang the luck! As a matter of fact, double hang it, and don't ask why; it's always grief I remember longest of all. Perhaps the only safe rule to cogitate is that a strike can always occur any time the lure remains in the water and sometimes as it is being lifted from the damp. And now lastly and quite important, the silent dive cast too frequently intertwined with ½ oz. plugs won't do the tip of that favorite bamboo any good; not if it's a medium or light action anyway. There's just too much resistance at the other end.

Locally, anglers tend to work the pumpkin seed very fast, making the spinners hum. Likewise I elect this method as the more productive for nice fish. The very construction of a sinking spinner job does not lend itself readily to struggling, hesitating, tantalizing retrieve. I like to see spinners blurr into an indistinct, whirring nothingness; otherwise fish turn away for me. Some fishermen, especially boatmen, will stand upright and wing a cast far away to the shoreline or down across the ledge pockets; then hold the rod tip almost straight up, reeling at a rapid rate. This retrieve causes the lure to churn

madly along almost atop the surface, creating a most positive wake. Big bass seem to love this play, challenge it after refusing all other offering. Sometimes it is the only method to coax 'em up. The latter failing, the same fellow will then vary the toss, lower the tip to the very surface, count off a few seconds for the lure to sink deeply; then begin a staggered retrieve. Many fine wall-eyes are taken in this manner. Incidentally, the high tip retrieve is the racket of the steel rod user; a fragile bamboo point delicate enough to satisfactorily handle the Baby Popper or the Midget Oreno is hard put to long stand up under such excessive punishment.

In as much as this tale seems to be disintegrating into a rambling hodgepodge of disconnected reminiscence I might add an observation or two at this point. In this section several refinements have been applied to spruce up the stock model Midget Spinner. A most interesting experiment, and incidentally productive, has been to have the spinners gold plated. I think most fishermen will agree bright nickle seems most practical on cloudy, misty days, or in discolored water, and mostly too harsh when the sun shines brightly on a clear current. Late in the season and in low clear water flashing nickle tends to scare ultra-wary fish, or warn them off. They'll follow the lure at a safe distance but refuse to strike. Granted the fisherman himself has not been detected, a quick switch to the gold-spinner job usually results in prompt action. Adding emphasis, the reverse dces not seem to hold true, that is, switching from gold to nickle.

Fishermen not caring to incur the expense of gold plating or lacking the opportunity may arrive at a somewhat similar, though less satisfactory solution, by sanding off the nickle with emery paper. And in the interest of truth, perhaps I had better qualify the latter statement. I've never tried emery paper on a Shakespeare Spinner, my experience being limited wholly to another somewhat identical, though lighter gauge blade. However, I suspect the nickle coat on the Shakespeare most likely hides a brassy interior. And now another confession. When your correspondent suspects low clear water bass being flash-wary, and spinner shy, I quietly switch to some other type fraud. Just to be contrary, of course.

Incidentally while discussing spinners, it is most important that one revolve clockwise, the other counterclockwise. If both spinners turn in the same direction, a submerged plug will likely loop the loop or turn over at regular intervals on every retrieve. Minnows do not swim in such a crazy fashion and a looping plug is a probable dud, red flagging the bass. Besides these loop-the-loops soon throw an impossible twist into the line. And let that serve as a warning to the pliers and paint bucket brigade. If hardware be removed from several plugs for odd repairs and then loosely tossed into the usual "handy

box" awaiting completion of the job always be careful to pair off the spinners in reassembling. As a matter of fact I've only owned one new Midget Spinner with identical spinners, and that no doubt due to a perfectly excusable error. A fishing pal and your correspondent ordered a dozen Midgets with special hooks. Then splitting the lot, a couple weeks later we began saying bad words. Each had one in his half dozen share which looped-the-loop. Investigation soon disclosed two "front" spinners on one plug, two "rear" blades on the other. The mix-up likely occurred while hooks were being changed. Maybe we jiggled around with them ourselves; I don't remember. Anyway we arranged a spinner trade and everyone felt right happy again.

No matter who the manufacturer, I always inspect a new spinner plug for identical blades. Incidentally such is standard equipment with several low price plugs commonly sold on the Keystone market. Generally these baits are very nicely made, have a good finish, likewise trustworthy hooks, and inglers readily take fish in quiet water where the current does not assist in the loop-theloop merry-go-round. As a matter of fact some fishermen for certain predetermined water prefer such spinners, insisting the habit of the plug leaning over on the side to simulate a wounded minnow is just what the doctor ordered. Sounds reasonable, too, and may be the studied intent of the manufacturer! However, not so for the roaring, cascading Juniata and Susquehanna ledge pockets. Not the way this angler and his pals retrieve 'em anyway. Bluntly, I prefer my wounded minnows weighted that way!

Although loop-the-looping may not always be easily discernible to the eye, especially in rough or discolored water and at the far end of a power cast, a twisted line is always cause for suspicion. The same is true of the horizontal riding plug which approaches the angler on the side. However, the surest test is to hold the plug directly before the mouth, blowing sharply, first on one spinner, then the other. If both revolve in the same direction closer inspection will generally reveal identical curvature, front and rear. Incidentally, another excellent test is to hold the plug beneath a strong faucet!

There's just one cure for identical spinners, and that is a session at the workbench with pliers and vise, or even a tough hickory broom stick suitably curved. Preferably the rear spinner should be selected for reversing. Remove the offender and ruthlessly flatten it out. Then grasp the middle of the flattened metal with a ¼" jaw pliers, Fig. 1, and work the curve back into the blade, reversing the original direction. Once partly formed, the rounded bevel of a small vise top or the hard broom stick handle will help in arriving at a symmetrical curve. Finished, perhaps the degree of curve may not be as smoothly per-

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ANGLER'S DREAM

By FRANK J. FLOSS

HOLY Smoke . . . What happened to the fish commission this year, this summary of the fishing laws that came with my license looks like a conservationists year book. I better read it all, not just glance over it the way I've done in previous years.

To begin with it states, that the fish commission has raised the size limit on Rainbow Trout from six to nine inches. Well, I agree with that, for I have always contended that the rainbow should be given a chance to grow to fighting size. This spectacular fighter of the trout family will also reach a weight of at least four pounds if given the right food and protection. Anglers who have had the good fortune of hooking into a rainbow in the pound class will agree that the fight he puts up eannot be duplicated by any of our other trout, therefore as a fighter it is only right that he have that added weight he gains at nine inches to help even the odds against him.

What's this? The creel limit on trout has been reduced to five fish per day.

Oh well! More small trout will be returned to the water, in the course of a days fishing, in the hope that a larger fish will be hooked in the next pool. Who wants to keep five six inch trout anyway, when five large fish will give fights that will live in memories forever.

Gee! A fisherman will be prosecuted by law, if he does not send in his fish kill report at the end of the season, stating, the kind of fish caught, how many he caught, and in what body of water he caught them. Now where did I put that voluntary report sheet for last year? I might as well get in practice now for next year, and send it in. Even if I did catch only 5 trout, 3 bass, and a sucker.

And here it says, that suckers have to be six inches or over before you can keep them. Heck, last year you could keep them if they were any size. But after all I guess I have to look at these things with an open mind. Anyway it does not take the sucker long to reach six inches, being a bottom feeder he will get enough food to keep him growing fast. And with this protection in a years time he will be a bigger and better fish.

It also says here, that the practice of throwing suckers, carp, catfish, and other non-game fish up in the bushes for the crows and turkey buzzards to feed on must be discontinued. For the new law states that anyone guilty of destroying or disposing of any fish in a wasteful manner will be fined \$5.00 for each fish so destroyed. Undesirable fish that are caught on your line must be returned to the water unharmed. That simply means, that every fish caught and not returned to the water, will have to be taken home and eaten or given to someone who will eat them. It also is a means of keeping a natural balance among all species of fish, every fish in the water was

put there for a purpose, to destroy a species of fish just because it is not considered a game-fish is the height of dumbness, when no one knows what the results would be if nature was thrown off balance.

At last! They state on the bottom of page 4, that fallfish must be six inches or over before they may be taken legally. I'll bet Charley French had something to do with that rule, he is always up to something that will better the fishing. That the Fallfish be six inches is as it should be for this largest member of our minnow family found in our warm water streams is a real fighter if taken on light tackle. Anyone that thinks otherwise should cast a fly over a swift riffle or an eddie that he inhabits and see how swiftly it vanishes, and how you will have to fight to get it back. Yes I can recall pulling many of these silvery fish out of Penn's Waters with my fly rod and it was fun. Of course the fallfish can't compare to the bass as a fighter, but, he will fight and as a fighter he belongs in the game-fish class. Let the meat fishermen go to the butcher shop if they want meat, our streams should be a place to enjoy sport, not a place to supply the family larder!

What's this about bass? Let's see, turn to page 5, humm, where's page five, oh here it is. All black bass beginning with the current season must be 12 inches or over. That sounds rather far fetched to me, then agin it doesn't. On thinking it over a nine inch bass is not anything to brag about, or anything to be proud of, and one fish that size is too small for a fish dinner. But take him at 12 inches and he is something to boast of, something to be proud of, and at that size he will weigh about a pound which is just right for a fish dinner. And whats more important he will have that added weight at 12 inches, that makes for a better fight.

I think I'll light up my pipe before I read any further. Ah, thats better. Let's see now, where was I, oh yes, here it is paragraph 3, sec. 2. All species of trout must be taken with barbless hooks. Now that's something I have looked forward to for a long time. I never could see much sense in unduly mutilating a trout's mouth when so many under sized ones have to be returned to the water on forcing the barb out of their mouths. When with a barbless hook nine times out of ten a little slack line will let the trout accomplish the trick himself, if dropped gently back in the water.

Wow, look what it says here, Plug baits having more than one burr hook of three points attached to it is illegal for use in catching game fish in the waters of Pennsylvania. Hurrah, I always did say a fish didn't have a chance against a plug with gang-hooks draped all over it like a christmas tree. I'd better make a note of that rule and next Sunday get busy and take all the hooks off my plugs except the one burr

on the end. Yea, and I'll bet I'll still catch fish, too.

And here is a once-in-a-life-time rule under section 30, it states that, All bluegills must be six inches or over before they can be considered keepers by anyone possessing a fishing license. With the exception that the small-boy or girl not old enough to require a fishing license may take bluegills of any size. That rule I just love. For the bluegill at six inches is one of the mightiest little fighters we have in Pennsylvania, and when taken on a fly rod of correct weight he will make it vibrate with all the viciousness his little frame possesses. It also is gratifying to see at last someone looking out for the boys and girls who like to fish. Putting this protection on the bluegill for adults and taking it off for boys and girls designates the bluegill as the small boy's fish. By putting a six inch adult limit on the bluegill insures the small boy that there will be plenty of fish for him to catch. This I am sure will do away with the large eatches of small bluegills that some adult fishermen indulge in, just to take home for a mess of fry. These fishermen will probably put up a big kick. Let them yell, for they may still have their bluegill feasts, if they catch them over six inches. What more can they ask for! And if they will just look into the future and visualize the enjoyment a small boy will have in catching bluegills. I think they will forget their stomachs and agree that Conservation Today for Tomorrow will make some small boy happy.

The small boy as well as the mature fisherman get's a break in the following provision, which states that: Beginning next year the fishing license fee will be raised from \$1.60 to \$2.10 the extra money will go towards improving fishing. Well . . . I for one will not mind paying this extra amount if it is used in the right way. For instance, they can use it to buy up old strip mines and convert them into fishable bodys of water. Or they can use it to purchase fishing rights on many of the excellent streams that are now closed to trespassing by fishermen. Or use it to build small lakes near cities that have no place for the small boy to go fishing. Or use it to build dams on our trout streams to keep such streams from drying up during dry spells. Oh I could go on and on, but what's the use, I only make my own head swim. If the Fish Commission uses this extra money for one worthy purpose I will be satisfied.

"Frank! Frank! Wake up! Are you going to sleep in that chair all night?"

"Huh? What? Oh it's you . . . Dear! Gec, I must have dozed off while reading up on the fishing laws. What a wonderful dream I had, if it were only true this state would be a fisherman's paradise. But alas it was only a dream. Yes I know Dear I can't do anything about the fishing, But . . . I can Dream . . . Can't I."

FROM THE COLUMNS OF THE OUTDOOR WRITERS OF PENNSYLVANIA

ROD AND GUN CHATTER

By THE OLDTIMER

Twin-Headed Fish Not So Rare After All Some time ago we wrote an article on Siamese twins and two-headed trout, inspired by Ed Hibshman's exhibit of "bottled in bond" freak trout secured from a hatchery in Middlebury, Vt. It seems from the reports we have since received from County sources that such freak fish are not so rare as we thought.

Our first communication was written by Gordon Trembley of State College, an authority on fish culture who is well known to Centre County sportsmen. Gordon writes:

"Dear Oldtimer: I have just read with interest your recent column on two-headed trout. I think that I can do my good friend Ed Hibshman one better, although I don't have 'proof in the bottle' as he does.

A Triple-Header

"Several years ago while doing some work at a New York State fish hatchery I ran across a three-headed brook trout and kept it for several months. At the end of this time it was about two inches long.

"I was then called away to another hatchery and upon returning found the trout had died. The attendant told me that he believed the fish had starved to death. According to his story, each of the three heads would try to snap up the same morsel of food, whereupon they all missed so that eventually the fish died of starvation. I always suspected that the attendant didn't gave the little fellow the loving care that I did. I have never seen another three-headed trout.

Two Heads Not Uncommon

"Two-headed monstrosities are not uncommon among trout fry. Anyone interested

in seeing them alive need only visit the Bellefonte Hatchery at this time of year. Another common type of monstrosity is that in which there are two entire bodies joined together only at the belly.

"Generally these fish die or are discarded at an early age. I suspect that the Vermont fish are much the same as our own with perhaps a little added care. To see them an inch long is not unusual, but to rear them to legal length would be. What fun there would be if a big 'double-feature' turned up in Fisherman's Paradise. One can only speculate on the results if one head took a bucktail from one bank while at the same time the other head took a streamer from the opposite bank.

"I have enjoyed your column. Now that the zero hour (April 15) approaches, I hope we have more articles on fish and fishing. Yours very truly, Gordon L. Trembley, assistant professor of fish culture."

'Fish Oddities'

About the same time as the above letter was received, Ross Buller of Bellefonte sent us word that he wanted to show us a movie reel which he had at the Pleasant Gap hatchery on "Oddities Among Fish." We can assure sportsmen's associations that this reel, as well as many others at the hatchery, is well worth seeing.

In this reel there is a picture of a three-headed trout disporting himself and wriggling his tail in his container. There are also pictures of Siamese-twin trout similar to the ones in Ed Hibshman's bottles. Ross says that such freaks are not uncommon among the millions of trout fry hatched out at the hatchery.

Short-Lived

He also said that these freak fish rarely live beyond the time in which the "gill-

Photo by Bertram Bennett of Philadelphia. When the fisherman is away the cat plays.

sack" which feeds the baby trout is obsorbed. This time is dependent upon the temperature of the water. In tepid water it is absorbed in a short time and in icy water it takes a longer time. At the Pleasant Gap hatchery the gill-sack disappears in 21 days.

Nobody, as far as we have been able to learn, has ever reared one of these freaks to legal length. It would be within the possibility to rear such fish by special hand feeding and, as Gordon Trembley says, many interesting possibilities are opened up.

But the weight of the testimony gathered thus far seems to be that in this particular case the old adage that two heads are better than one has been disproved.

State College Center Daily.

CAMPFIRE CORNER

Saviour of the Warm Streams

With the logging of vast expanses of wood-lands and the resultant lowering of water levels and drying out of subsoil, numerous cold springs that used to feed our little woodland rivers dried up. Sometimes the smaller streams vanished entirely, in other instances the flowage was reduced and the temperature of the water lowered. Draining of marshes to "reclaim agricultural land" played a villain's role in the process.

Brook, or native, trout cannot survive and propagate in water whose temperature is consistently much above 55 degrees Fahrenheit. At 68 degrees or so they can exist for a time but are doomed to extinction. So it followed that when the cold springs disappeared or were decimated, the brook trout vanished, too. Almost any old-timer, and he does not have to be very old at that, can tell you of streams where native trout once swam in considerable numbers, but where now you can catch nothing but suckers and dace.

Sometimes, however, you can still hook trout in warmed-up streams from which brookies have disappeared, often big fellows that fight gamely and rise to the fly with all the voracity any disciple of Izaak Walton would wish. They're brown trout, or Lock-levens, descendants of trout released in streams of this country back in the eighties. They'll live and flourish where a brookie trout can't—in warmer and less pellucid waters.

No Trout but for Them

Next time you hear someone knocking the brownies as having "driven out all the natives" you might call these facts to his attention and remind him that if it weren't for the browns there probably would be no trout at all in the stream in question. It's true that brown trout shouldn't be introduced in streams where native trout abound, though the brownies seem to get along O. K. with rainbows, which are an exotic species, too, from the west coast. Often the browns will afford tops in dry fly fishing where no other trout are to be had.

The brown trout, Salmo fario, was first

brought to the United States from the continent of Europe in 1883, and soon thereafter Scotch brown trout, Salmo trutta levenensis, supposedly a sub-species, was introduced. There's so little difference between them that Dr. C. L. Hubbs, Michigan authority, says there's no reason for making any distinction between the two. It is said, however, that the Lockleven is a little more slender and has less prominent spots.

"Brown trout are about the only trout that can exist under present-day conditions in many streams in the southern part of Minnesota," say Eddy and Turber, "consequently many have been planted in that section of the state, with excellent results."

An outstanding trait of the brown which helps enable it to survive where other species die is its extreme wariness. The brown trout is rather dark colored, with a square tail, and is well marked with dark and red spots along the sides. It attains a much greater size than native trout but hasn't the latter's appetizing flavor.

Tradition says that one weighing 39 pounds, 8 ounces, was landed by rod and reel in Scotland back in 1866, but if you catch a five or six-pounder nowadays you stand a fine chance in a nationwide fishing contest. Many a local trophy has been copped with a three or four, or even a two-pounder. Specimens weighing 11 pounds are so unusual as to rate special attention in the record books.

There's some argument about the gamey qualities of the brown. One expert describes him as "very sporting . . . frequently leaps clear of the water when hooked," and another authority of equal prominence declares that "while small specimens of both the brown and brook trout leap out of the water, the adult specimens are notoriously underwater fighters." Possibly it depends upon the nature of the waters from which they're taken. I've never hooked one, large or small, that leaped clear of the water, though they always put up a good fight.

Besides being insect eaters, brownies go for crawfish, snails, worms, frogs and hell-grammites. You can take 'em on night crawlers, fished along the bottom of the stream, or on nymphs and streamers. If you aren't a purist you'll find the lowly earthworm about as good a bait as any, particularly early in the season. Try it at twilight or a little later in the evening and you're likely to snag a big one—after all, an old sockdollager has to have something more substantial to eat than little fish flies!

-New Kensington Daily Dispatch.

Sittin' On The Sideline With Cappy

Bad News for the Trout Fishermen

While a great number of readers are already acquainted with the news event with which this article is concerned, there are some facts that may need clarification.

Up to the present I have said nothing concerning the matter. I wanted to make sure that facts are facts. So many stories are told in cases of this kind that a great many must be discredited.

In case you are not acquainted with the story, here it is:

The other day a break occurred in the Little Big Inch line that has recently been bringing gas and oil supplies to the Eastern Seaboard. That break released into Big

(Continued on next page)

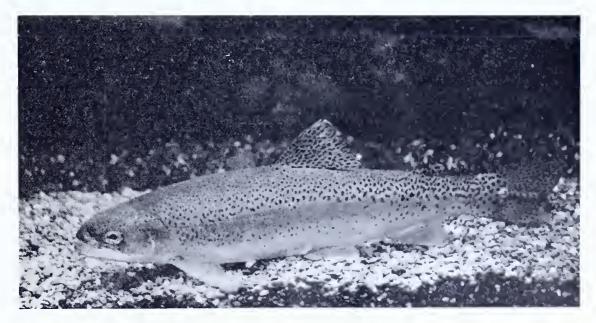
There Are Three Common Species Of Trout In Pennsylvania



There are more brown trout in Pennsylvania than brooks or rainbows. The brown thrives in the big warmer trout waters and ean endure in water 80° . In sp.te of the fact that he has no peer as a surface feeder he holds up well under great fishing pressure.



The brook trout is our native trout but much of the water he once inhabited now becomes too warm for his existence. 70° is his maximum temperature. "The speckled beauty" is at his best in clear mountain streams and in such water which does not become muddy he reproduces his kind.



The rainbow trout, a native of the coastal streams of the Pacific, is a fast, powerful and active fish. As a jumper when hooked he reigns supreme. He is a free striker and is readily hooked. The fish culturists are hoping to breed out the migratory instincts prevalent in this trout.

Montgomery County sportsmen tote rocks from hither and you and make a pool by damming.



Charles Halberstadt of Gladwyne, enjoys an April day on Mill Creek and reaps the reward of catching some nice brownies above one of the small dams which has been constructed.

Lower Merion Rod and Gun Club Improves A Stream To Create New Trout Water



Club members have looked over Mill Creek, a tributary of the Schuylkill, and have decided that at this point there are plenty of rocks lying around and that this is an ideal spot for a miniature dam for the brook and brown trout which will be forthcoming from the Fish Commission. Work is started by: Howell Deitrich, of Upper Darby, Edwin Anderson, of Philadelphia, Ernest Jenkins, of Narberth and Walter Johnston, of Roxborough.



Before long the rehabilitated fishin' hole looks like this—a spot which will furnish food and cover for trout and an interesting place to fish.

FROM THE OUTDOOR WRITERS

(Continued from page 11)

Laurel Creek hundreds of gallons of 100 octane gasoline. It killed a great number of the fish in the creek.

Big Laurel was the best of all the trout streams in this district. It was the one real stream, the one that was actually big enough and good enough to carry a sufficient supply of trout to meet the demands of district fishermen. Whether it will ever carry trout again is problematic.

The Route of the Pipe Line

In order that you may better understand what actually happened, it will be necessary for you to know where this pipe line is located.

It enters Fayette County from the river, goes thru the Uniontown district and first

crosses Dunbar Creek. It crosses Dunbar about one quarter mile above the area where restricted fishing begins.

From Dunbar it goes on over the next mountain and crosses Morgan Run . . . Little Laurel as it is sometimes called. It crosses there about two hundred yards below a little wooden bridge. This is on the road to the old school house where we park our cars. From there it crosses the Yough River to Sandy Creek. From Sandy Creek it runs across country till it spans Fulton Run, a tributary to Mill Run, another good trout stream.

Then it crosses Harbaugh Creek, a tributary to Big Laurel, and goes down the valley over Big Laurel near the new King's bridge. The route followed from that point on I cannot tell you

The point in all this geography lesson is

this. THE BREAK ACTUALLY OCCURRED ON HARBAUGH RUN and the gas came down that run into Sandy and then into Big Laurel. If you are acquainted with the territory at all you now can begin to realize what the possibilities are.

The Actual Damage Done

What the actual damage has been no one is certain. Without question of a doubt thousands of the trout have been killed as well as a lot of the other fish. Not only is this true of the Big Laurel but also of the Yough River near Connellsville.

Last season bass were being taken from the Yough as well as suckers and catfish. This was the first time in many years that fish had showed signs of returning to that stream.

I am not too much worried about the trout that were killed, there are thousands of them in the hatcheries to replace them. The thing I am wondering about is the extent of the damage done to the insect and minnow life of the stream. Regardless of the number of trout placed in the stream, they cannot survive without a food supply.

As I stated, the amount of the actual damage is unknown. At the present time the streams are so high and so muddy that it is impossible to determine the true facts. Everyone is keeping their fingers crossed hoping for the best.

What About the Future?

Another point in this matter for your consideration: What about the future of this line? This is not the first break that has occurred and in all probability will not be the last

What is to happen to the rest of the trout streams when and if these breaks do occur? What can the fishing fraternity of the state expect about the matter? Paying for the fish in cold cash is not the solution to the problem. It will be no fun fishing a fishless stream. We have enough of them now.

I am, as you and lots of the fellows, a lover of good trout fishing. I can think of nothing I like to do better than get out in the open on a good trout stream and pit my skill against the wily trout.

I am, as you and all the rest of the fellows, first and foremost, an American, intensely interested right now in one thing, winning this war.

This pipeline is a war necessity. It is supplying thousands of gallons of the life blood of our machines which are bombing Germany off the map. They must have it. It is absolutely necessary.

The true sportsman will put this point first, all and any other consideration, secondary.

If you will go back to your map and retrace the route of the pipeline you will quickly recognize one fact. There is a distinct possibility that every trout stream in this section of the state, that has any value as a trout stream, stands a chance of being ruined.

I sincerely hope this will not happen. It could happen, and before it does some action should be taken. Some preventative measure should be taken to insure the fishing fraternity that it will not happen. These breaks are not abrupt in their making. A great many of them show a seepage for days before the actual break occurs.

This may not be true in all but in a great number of cases. It is possible that a system of line walkers could be installed. A great number of these leaks might be discovered in time to prevent more serious damage.

I believe that if it were an absolute necessity for leaks that the trout fishermen would be willing to give up fishing entirely . . . If it is a necessity.

I do not believe that things will come to this point however. I can see no reason why something cannot be done that will assure those fellows their full supply of the much needed gasoline and at the same time assure them of good trout fishing when they

We must have the gasoline. It can be had without ruining miles of good trout waters.

It may be that you are the fellow who will have the solution to the problem. If you do send it in to me and I will see that you are given full recognition for the idea. It may be that your idea will be the means of saving thousands of our game fish. It may be that your idea will be the one that will furnish hundreds of hours of good clean enjoyment to those boys when they return. If this is the case your name will be blessed by every good, honest, dyed-in-the-wool trout fishermen in the state.

This is a serious problem and should be solved as soon as possible.

-The Charleroi Mail.

Library Marks Trout Season Opening With Fine Lobby Exhibits

A lobby display marking the opening of the trout season has been arranged by the James V. Brown Library, which has brought together a notable exhibit consisting of famous books on fishing, and representative works of Pennsylvania and Lycoming County writers of fishing subjects, together with pictures and mounted specimens of game fish common to this area.

The Pennsylvania books include "Pioneer Life, of Thirty Years a Hunter," by Philip Tome, a first edition published in 1854, which contains graphic descriptions of fishing on Pine Creek in 1792.

"Bodines, or Camping on the Lycoming," by Thad S. Updegraff, 1879.

"The Vanishing Trout," a collection of the fishing stories by Dr. Charles Lose, many of such originally appeared in the columns of The Sun.

"The Loyalsock," publication of the Lycoming Historical Society, 1933, with a picture of Dr. Lose fishing on the 'Sock, illustrating his article of "The Loyalsock, a Trout Stream.

"In Williamsport," by Dr. O. R. Howard Thomson, a portion of which celebrates Lycoming County trout streams in verse.

'Woodcraft" and "Fishing With the Fly," by Nessmuk, under which name George W. Sears, of Tioga County, wrote as the first man to deal with fishing as a sport for the common man, instead of as a diversion for 'gentlemen.''

"The Pennsylvania Angler," with an article by Dick Fortney, pen name of Richard F. Williamson, local newspaperman and popular writer on fishing.

"Dry Fly and Wet Fly," by Brua C. Keefer, from The Sun, May, 1936.

The works of John Alden Knight, Williamsport resident who has established an international reputation as a writer on fishing subjects, including numerous books and

the "Solunar Tables," based upon his research in the field of the feeding periods of

Other books on display include "Trout," by Ray Bergman, showing colored charts of dry flies; "The Fly Fisher's Entomology," Alfred Ronalds, Liverpool, 1913, an album of dry flies; "A Book of Trout Flies." by Preston J. Jennings, 1935; "Little Rivers," by Dr. Henry Van Dyke, with laudatory references to Rock Run at Ralston; "Six Months in America," by Godfrey T. Vigne, 1832, an English sportsman's account containing the first published reference to fly fishing in Pennsylvania; "Blaker's Art of Fly Fishing," London, 1855; the first American edition of "The Complete Angler," by Izaak Walton; and "A Treatyse on Fysshynge With an Angle," by Dame Juliana Berners, 1492, the first printed book on fishing.

The books in the latter group are from the collection of S. Dale Furst, Jr., Williamsport lawyer and secretary of the Consolidated Sportsmen of Lycoming County.

Mounted fish have been loaned by S. C. Castner and others.

Pictures supplementing the display show the better known fishes of Pennsylvania, Indian methods of cooking fish and the implements they employed.

An unusual feature is a group of bone spear heads and fish hooks, loaned by the Lycoming Historical Society. They were found in scientific excavation of Indian sites in Lycoming County carried out under W.P.A. auspices several years ago.

The main library room has a table devoted to a display of the books on fishing which the library has in circulation, together with colored charts showing the fishes of Pennsylvania, with scientific descriptive data, issued by the Board of Fish Commissioners.—Williamsport Sun.

STREAM PURIFICATION WINS PHILADELPHIA COURT TEST

By JOHNNY MOCK

A good decision on a bad situation.

In the City of Brotherly Love, Judge Joseph L. Kun, sitting in Common Pleas Court No. 2, ruled in his opinion of March 22nd, in an injunction suit against 24 Eastern Pennsylvania coal mining companies, that the rights of the people, when health and life are dependent, transcend the rights of a public industry.

The opinion of the judge, according to the Pittsburgh Legal Journal issue of Monday, March 27, cleared legal obstacles for Philadelphia to bring to trial the city's injunction suit to restrain the Philadelphia and Reading Coal and Iron Co., the Lehigh Coal and Navigation Co. and 22 other mining companies, from discharging coal silt and wasteage into the Schuylkill River and its tribu-

Judge Kun's opinion said that, in matters of "trifling inconvenience," an individual must give way to the "necessities of a great public industry.

"When the latter clashed with a fundamental right of the public," his opinion held, "the industry must give way, and nothing is more fundamental than the right of the people to have the public streams from which they draw their water supply, free from pollution. That right is supreme, for

the simple reason that health and life itself depend on it."

Judge Kun's opinion was in answer to counsel for the coal companies, who filed preliminary objections to the city's suit begun by City Solicitor Robert McKay Green after the Supreme Court of Pennsylvania refused to reopen a similar suit instituted in

Judge Kun overruled a company objection that the city delayed unduly in bringing the suit, and another objection that the city failed to name as defendants bootleg mining concerns or individuals operating in the coal fields.

It is most refreshing to note that the courts are coming to look upon pollution in the same light that the sportsmen have looked upon it, ever since industry began using the streams as burial grounds for things in which industry could find no profit.

-Pittsburgh Press.

THE SPORTSMEN'S CORNER

By DICK FORTNEY

Paragraphs from a V-mail letter from England, written by Cpl. William D. Sholder, of Williamsport:

"While I was stationed in the vicinity of the Kennet River, in Southeastern England, the waters of the stream were polluted, and more than 10,000 fish were killed. I saw hundreds of pike weighing from two to ten pounds along the banks. This was the first time the natives had ever seen the Kennet poisoned.

"I was surprised and pleased by the purity of the streams, even though they flow through industrial towns. Why can't we have the same conditions in the Susquehanna?

"It would be a fine monument to the boys in service all over the world to cleanse the streams instead of building monuments."

-Williamsport Grit.

TRAILS AND WATERS

By JOE O'BYRNE

Shad made its annual appearance on the menus in the eastern part of the country, but none have shown up in any of the waters in the vicinity of Philadelphia.

Years ago Philadelphians, as well as other residents of this area, were fortunate when they could enjoy Delaware shad, fresh from the river. Today, however, most of the shad distributed throughout this area come from the Chesapeake Bay region.

Even if they were taken from the Delaware River, it is doubtful if they would be labelled as such, as that would certainly milit te against any sales because of the pollu ed condition of the river. It is claimed that shad derives its delicious flavor from the oil it contains, but that taste is altogether different from the oil that pollutes the Delaware.

It is difficult to realize that not so very long ago shad migrated up the Delaware (also the Schuylkill) by the thousands. Residents near the rivers hauled them away by the wagonloads, but now they can be classed "occasional spring visitors." Comparatively few shad are seen in the Delaware these days, and none brave the waters of the Schuylkill.

Shad usually migrate up fresh-water

streams sometime during March or the early part of April to spawn near the headwaters. They are common along the Atlantic Coast, and those which are transplanted along the Pacific Coast have increased tremendously and are now migrating in large numbers.

Flyfishing for shad with artificial grub and bass weight flyrod is becoming very popular, particularly below the Conowingo Dam on the Susquehanna River. They are running right now, as we have a report from Ed Duke, of Germantown, who just received a six-pounder caught there by Lou Balderman.—Philadelphia Inquirer.

FIELD SPORTS

A Fish Survey Needed

One of the most important items on the docket for a post war fish conservation program in Pennsylvania is the undertaking of an accurate survey of all streams and pends in the State, especially in regards to the fishing possibilities of the waters concerned.

You may add why not now. Well the Fish Commission had just begun such a program prior to the present emergency when their young Cornell trained stream engineer was called into the services.

Just what can be accomplished by such a program. To detail our thoughts on the matter, let's look at the Little Lehigh.

Among other information, the Fish Commission should have an accurate length of the stream; average water temperatures; type of water in the stream; gauge readings at points of advantage; miles of open water; and the number of anglers who frequent the stream throughout the season.

Such data would give the Fish Commission a true picture of the stream and would determine the stocking policy of the waters concerned. Rather than relying on judgment surveys, our commissioners would have a complete picture of the stream.

Another point that such a State survey would stem is the continuous cry for more fish in a certain stream. Under the present system some of the clubs are perfectly justified in asking for more fish. By the same token other clubs may have streams which should not be stocked as heavy as they are at present.

Information, if correctly interpreted, would save the commission thousands of dollars worth of fish each year. The commission is your agent and the saving would be reflected in the pocket of the anglers.

Such a thought as stocking large trout in a stream which has just about enough water to cover the back of some old lunker and another larger stream receiving "riffle sniffers" would also be eliminated.

The commission has the program on their books and are looking for the day to carry it through. We'll add our amen when that day comes.—Allentown Call.

LET'S GO OUTDOORS

WITH SLIM

DRY FLY FISHING—Dry fly fishing is an attempt to imitate the natural insects, alive or dead, as they float downstream with the current. The line should be greased, the fly anointed with oil to make it float or dried by false casts. Trout generally lay with heads upstream, so the logical way to fish is to approach them from the rear, and

cast up stream letting the fly float towards you. Coil the line in your hand for the retrieve. Trout will strike with a vicious swirl, and you should lift your rod quickly to set the hook and take up the slack line. Trout rarely miss—its detection of something wrong may cause them to "miss" instead of take the fly, however. Whenever possible, match the flies on the water; sometimes it will be a dun; other times a spinner. Here are a few dry patterns which may help guide you in filling your fly book, carry them in different sizes:

Quill Gordon
Fan Wing Royal Coachman
Light and Dark Cahill
Light and Dark Hendrickson
Ginger Quill
Green Drake
Red Spinner
Bi-Visibles
Spiders
Black Gnat
Pale Evening Dun.

-Lancaster Era.

ROD AND GUN

The kind of battle that a trout puts up when you hook him depends on you as a fisherman. Try to horse him and he is going to splash around; give him plenty of line with only a little pressure and wear him out and you can hold him on a leader of amazing finess. It takes you a long time to learn this.

Years ago we didn't believe it when Al Bond told us he used tippets as fine as 8-x to land some of the 15 and 20-inch trout at High Bridge. But now we know it is true.

When you stop to think about it, you wonder why you never reasoned it out before. When you start out as a rookie fisherman you are excited. You have been told of the fight that a trout puts up. You get a couple of strikes and it doesn't take you long to learn that a trout is faster than greased lightning. He can hit and get away again before you know what has happened. The result is that you are constantly on edge and when he strikes you give a tremendous vank that many times tears the leader. Even if the leader does hold you fight the trout with great pressure and he battles right back with you. Nine times out of ten he is able to fight his way off the hook.

And then one day you experiment by letting the trout have his own way and you are amazed how easy it is to handle him and how slight is the strain on the tackle. You get to thinking about it and experimenting with lighter tackle. Pretty soon you find that you can hold them with a 2-x and a 3-x and may even go down as far as a 4-x or 5-x. But it takes years, for when you begin, this kind of experimenting you must be ready to lose flies and plenty of trout until you get just the right touch.

Don't forget that the rod you use plays a big part too. One of our friends has a stiff rod of pretty good weight and his biggest trouble is leaving the fly in the striking trout's mouth. He has not yet learned the knack of setting that hook. He strikes too hard. He should get a lighter, softer action rod, too.

Learning to set the hook when a trout takes the fly is the most difficult part of fly fishing, either wet or dry, we would say. Set it too hard and you tear the leader, tear

the fly out of the mouth of the trout or even if it does hold you set the trout dancing in the air where he can shake off. Be too slow and you lose him. Set it just right and you can handle him on any thickness of leader. If you can do it right half of the time you can call yourself pretty good.

-Pottsville Republican.

WORTHY EXPERIMENT

By official action of both the Lehigh County Fish and Game Protective Assn. and the Unami Fish and Game Protective Assn., Emmaus, agreement was reached to close the lower Little Lehigh to fishing from Thursday noon until Saturday morning 5 o'clock.

The stretch of stream involved is from Schmoyer's mill one mile west of East Texas to the mouth of the stream. During the closed period, the State Fish Commission will make a liberal stocking of the stream.

Last year the Pennsylvania legislature empowered the Fish Commission to close a stream stocked with trout during the open season for a period of five days or part thereof. The local sportsmen feel that the closing of the stream for 36 hours will give the fish a chance to move about and prevent the boys who follow the truck to begin fishing after the trout have been dumped into the stream.

This is a real sportman's act and the both clubs are to be commended for their stand in the matter. New Jersey has been doing the same thing for many years and it has given not only the fish a chance to get acquainted with the stream but also affords better fishing for more anglers.

The penalty, according to the fish code, for violating the act is \$25. Signs, furnished by the Fish Commission are coming with the truck on Thursday and will be posted on the stream throughout its stocked course.

If it produces results as we hope it will, then let's have more stocking for the week end angler who by the way turns up in the greatest numbers. Sunday's fishermen on the stream proved that.

SPORTSMEN ELECT OFFICERS

The newly elected officers of the Tarentum District Sportsmen's Club are: Pres. J. R. Stewart, Vice-Pres. C. H. Hoak, Sec. W. H. Ahner, Treas. A. Norris and Ass't Sec. Wm. Smith.

How much do you have to know in order to know how little you know? A couple of sailors got into a discussion over the kind of animal a heifer was. One sailor claimed that a heifer belonged to the Hog family; the other that it was a variety of Sheep. Finally they called in Boatswain Bill. "Bill, what's a heifer—is it a hog or a sheep," they asked. Bill bit off a large chew reflectively, then said, "To tell the truth Mates, I dunno much about poultry."

TAKE A BOY FISHING

(Continued from page 2)

chin was cupped in his hands, and he was gazing at the mountainside across the stream.

"What luck, son?" I asked.

Silently he opened the top of his creel and showed me two nice brook trout. Then he spoke: "Gee, it's nice out here! It's so quiet and warm, and it smells so good. I sat here and went to sleep a little while ago, and I guess a trout came along about that time, for when I woke up and looked at my hook it was bare."

He paused a moment and stretched lux-uriously.

"I feel sorry for the kids back in the city this afternoon," he said. "Bet they're not as happy as I am."

But to get back to the questions before us.

What do we fishermen expect to do with the lore we have acquired? Write a book, or an angling article, perhaps; but few of us do that. Look it up in our minds? Heaven forbid!

Let a man take a boy fishing, instead, and share his skill and his secrets with his young companion. Let a man get a bit of honest satisfaction out of bragging on a modest scale; let him bask in the warm glow of admiration that dawns in a boy's eyes when he listens to a tale of adventure and fun on a trout stream.

Who do we think will take care of our streams when we have grown too old for fishing? Let the state do it? Trust it blindly to the hands of those who may follow us? Never!

Let a man take a boy fishing—and pass along to him the traditions, the history, the character of his favorite stream. Let a man teach a boy the principles of conservation—the sportsman's creed, the need for constant vigilance against pollution. Let a man teach a boy, by word and deed, the deep and lasting pleasure of traveling a mountain brook, the fine companionships that are cultivated astream, and an appreciation of all the wonders of nature.

Do we think that boys will learn angling out of books?

Let a man never hand a boy a pamphlet on how to fish a dry fly; but let the man, instead, take the boy to a trout pool, lend him his own rod and fly, and teach him by showing him.

There is a father in my home town who has taught his son, just barely past the age of 13, to make trout flies. Many an evening they spend together, the father at one end of a table and the son at the other, both engrossed in their fascinating hobby, and the son already turning out lures that neither he nor his father need be ashamed of.

"I've found a wonderful fishing companion in my own son," this father told me. "The most enjoyable fishing trips I have had in years have been with him—when we rode to the stream in a bus and fished all day, catching the bus back to the city in the evening.

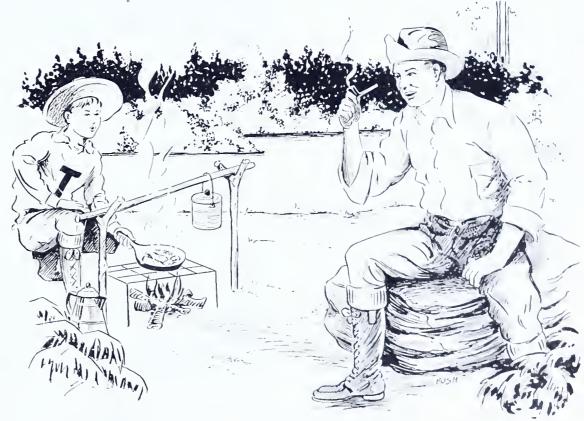
"He was crude in the beginning, but he listened eagerly when I showed him and explained to him what to do. Now he is a polished and confident angler—and I'm not saying that because he's my own son."

I listened to a law officer give a long and impressive lecture on the subject of juvenile delinquency. He told of case after case of boys in their 'teens who have become entangled with the law. Following his address there was a learned discussion by attorneys and churchmen on the cure for juvenile delinquency, and the debate boiled down finally to a suggestion that some central recreation center be established in the city. Had I the courage of my convictions, I would have gotten to my feet and exclaimed:

"See to it that some fisherman makes a friend of every boy in our town, and you won't have juvenile delinquency. We fishermen can take these boys and get them so interested in the outdoors that they won't have either the time or the desire to steal goods from a dime store or let the air out of the tires of parked automobiles."

But I kept silent. I knew that audience, and I would have been misunderstood had I spoken.

You see, there wasn't a man in the group who was a fisherman!



"Oh! this is the life, and will that grub taste good."



This picture is a real memory refresher and it turns back the hands of the clock some three decades. On that great day a wonderful $5\frac{1}{2}$ pound bass took the old and justly famous Decker bait.

MEMORY CREEL

(Continued from page 5)

of this plug and examined it very closely. "What in the Sam Hill do you expect to catch with that contraption?" he exclaimed. "You just watch and see," I replied optimistically. "The circular called this place paradise—have you forgotten?"

Picking out an open space among the lily pads, I let one go. It hit the mark, landing with a resounding splash! I let it lay there for a few moments, and then started to retrieve. Churning through the water like an old side-wheeler, "Steamboat Bill" made quite a commotion! Suddenly—Ba-a-a-ng!! The water seemed to explode, as a large mouth bass struck with the savage fury of a killer! I set the hook and the fight was on. Here was action and plenty!

Darting for the shelter of the lily pads, that first rush took about twenty feet of line and made my heart go bumpity-bump. Snubbing him as much as I dared, I checked his mad dash in the nick of time!

"Get me into deep water," I shouted and Stan skillfully obliged!

Once in the clear, that battling bronze-back took to the air with an amazing display of acrobatics. Once, twice—he broke water, desperately shaking his head to get rid of "Steamboat Bill" who looked so tempting but a few moments before! Again and again he leaped, but it was all in vain—"Bill" couldn't be dislodged!

Fighting every inch of the way, "Old Bronze Back" came closer and closer. "Grab the net," I yelled excitedly—but Stan was 'way ahead of me! Swis-s-s-sh!! That son of a sea-cook must have seen the net coming, for he took a nose dive right under the boat!

"Hang on," Stan shouted as he almost fell overboard! Instinctively, I spread my knees against the gunwales and leaned the other way. "Boy-oh-boy, was that a close shave!"

The canoe stopped rocking and I breathed a sigh of relief. Picking up the rod, I reeled in the slack line and was happy to feel "Old Bronze Back" still struggling on the other end, but he was weakening. Drawing closer to the boat, that gamey old scrapper was licked and he knew it. Once more, Stan dipped the net into the water and this time he didn't miss!

I think that was the proudest moment of my life, as I held him up admiringly for Stan to snap the picture. My first big bass. That was in 1913, over thirty years ago—but whenever I look at the picture, I live

through the battle as if it were yesterday. Get into a hobby that knows no age limit and re-live those glorious vacation days, with the aid of a camera. Take time out to snap some pictures, and even if you don't develop them yourself—use your camera to record the *highlights* that will linger long in your "memory creel."

Baked Fish Fillets

1 pound fish fillets

1 cup milk

1 tablespoon salt

Fine dry bread crumbs

1 tablespoon oil or melted butter

Cut fillets into serving pieces. Combine milk and salt. Dip fish into milk, then into crumbs being sure fish is completely covered with crumbs. Place in greased baking dish or on ovenproof platter, sprinkle with oil and brown quickly in very hot over (500 F.) 10 to 20 minutes. Do not add water. Serve with Almond Butter Sauce, melted butter, Maitre d' Hotel Butter or Lemon Butter. Serves 2.

Potted Carp

½ cup cooking oil

2 pounds sliced carp

2 onions, sliced

2 carrots, sliced

5 gingersnaps

1½ cups warm water

½ teaspoon whole mixed spices

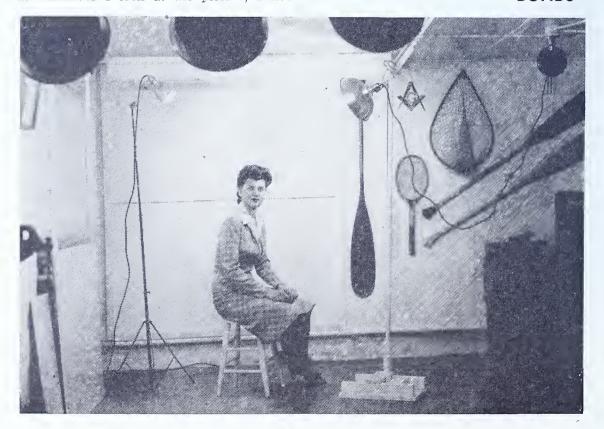
½ teaspoon salt

Pour half of oil in baking dish, arrange half of sh on top, cover with half of onions and carrots, add remaining fish and vegetables. Soften gingersnaps in water and stir until smooth. Add spices and salt and pour over fish. Add remaining oil and more water, if necessary to cover fish. Cover dish and bake in slow oven (325 F.) about 1 hour. Serves 4.

BUY

MORE

BONDS



The dark room studio is 100% light proof. The lights are arranged so that they will give a perfect snap shot on amateur film. The main lights are No. 2 Photo-floods, the modeling light No. 2 and the spotlight No. 1. A 30 ampere fuse is used for protection.

DEVELOPMENT OF FLY FISHING IN AMERICA

(Continued from page 7)

vanians, may be mentioned the following excerpt:

"In Kettle Creek, Fowder River—unknown to the writer-Young Womans Creek, and all the tributaries of the Sinnemahoning River —the latter a branch of the Susquehanna the angler may cast his line with the assurance of quick and full returns."

"When my first visit was made to this region many years ago, it was no trifle of an adventure to penetrate into its jungle; but now there are increased facilities, either by the Erie Railroad to Genesee or the Philadelphia and Erie to Emporium, and thence by stage to Coudersport and wagon

road to Young Woman's Town.

"That this wilderness is not wholly without inducements to immigration and settlement, is evidenced by the attempt of the celebrated 'Ole Bull,' twenty-five years ago, to establish a Norwegian colony there. Right in the depths of the forest, overgrown with brambles and brush, and inhabited only by hedgehogs and owls, stands the castellated structure which the sanguine violinist fondly hoped would be the nucleus of a flourishing settlement. Graded carriage roads, over which no carriages ever rumble, sweep up to the door of the mansion. Splendidly built log cabins surround it at circumscribed and deferential distances, like the old time negro quarters of a Southern plantation; but decay is consuming them gradually, and desolation sits within their doors. Great trees have grown from their foundations, and saplings protrude through their roofs. On every side are evidences of lavish expenditure and misapplied energy, just as there are in the wilderness of 'John Brown's tract' where the old man's son attempted years ago, to establish iron works that should multiply his fortune and supply the world. Both efforts failed by reason of their inaccessible distance from a market. So completely overgrown and hidden from view is this hamlet of Ole Bull's, that one might pass within a few rods without perceiving it. Here and there a Norwegian family still lingers in the region, but the country is mainly restored to its original possessors, the wolves, the bear and the deer."

In 1883, Thad S. Up De Graff, M.D., came out with "Bodines, or Camping in The Alleghanies" which is mainly devoted to his fishing experiences on the beautiful and picturesque Lycoming Creek, in Pennsylvania. One of the most interesting chapters is that under "Paraphernalia" wherein, the merits of the various types of fishing rods, are discussed pro and con. One can here visualize why the split bamboo rod was so long in gaining a foothold in this country. "Bodines," is rich in historical lore, and Up De Graff's account of other streams such as Kettle Creek, Young Womans Creek, Slate Run, Big and Little Pine Creeks, furnish most interesting reading of the fishing as found in Pennsylvania waters around that time.

Hanshall's work, "The Book of the Black Bass" 1881 has already been mentioned. It was written exclusively on the black bass, a pioneer task, and will no doubt live long as one of the best books on the subject.
"Fishing With The Fly," 1883, by Charles



It is breakfast time and Stan kept what we needed. Fine pictures of wonderful trips are

F. Orvis, and A. Nelson Cheney, was one of the first books to portray artificial flies in lithograph. The coloring is excellent, but one wonders what success he would have on the streams nowadays, if using such gaudy creations. "Nessmuk's" account of meeting trout on the June rise in the vicinity of Pine Creek furnishes most entertaining reading.

"Fly Rods and Fly Tackle," 1885, by Henry P. Wells was a noted and detailed work on rod making and fishing tackle. This book probably contributed more to the light fly rods now in use, than any other. Wells was a skilled craftsman, an expert fisherman. and had the ability to express his thoughts in an understanding manner. He is credited with another book, "The American Salmon Fisherman," 1886.

In 1887, J. Harrington Keene, came out with "Fly Fishing and Fly Making." In his preface, he states that: "Many works describing fly making in the land of Walton exist, but no practical fly tier has hitherto attempted to specifically instruct the American Fly fisherman." That the book contributed greatly to American progress in fly tying cannot be denied. There are two plates in the book, showing the actual materials used in fly tying-tinsel, hackles, feathers, etc.—but the rather crude manner in which the wing feathers are cut and trimmed, proves distinctly disappointing. "Favorite Flies" 1892, by Mary Orvis Mar-

bury, is probably one of the most sought after works in the old book markets today. Mrs. Marbury's father was Charles F. Orvis, one of the co-authors of "Fishing With The Fly," described elsewheres. Orvis was a noted tackle maker of Manchester, Vermont, and his descendents are still carrying on the same business there. Mrs. Marbury was an expert fly tier who never used a visc; and her book is replete with historics of artificial flies, as well as numerous colored lithographic plates of flies, beautifully executed. She states that: "At present fishermen are chiefly indebted to the fly makers of Great Britain for copies of the insects alluring to game fish. Their experience extends back for centuries before our time or country even, and until we have studied more thoroughly our own stream life, we do well to abide by many of their conclusions; but

(Continued on next page)

DEVELOPMENT OF FLY FISHING IN AMERICA

(Continued from page 17)

there can be no question, that in the years to come, the differences between the insects of the two countries, will be better understood and defined, and that a collection of the water insects interesting to the fishermen of America, with directions for accurate imitations, arranged after the manner of Alfred Ronald's 'Fly Fishers Entomology,' would be of value."

I must here digress a bit, and pay some attention to the artificial dry fly, which though practically unknown in this country at that time, was rapidly coming to the front among the anglers fishing the Chalk streams of Southern England. The merits of this type of fly was ably championed by Fredrick M. Halford, undoubtedly the world's greatest fly fisherman. Halford was not the originator of the dry fly, as the first recorded instance of this type of fishing appeared in "The Vade Mecum Of Fly Fishing For Trout" 1846, by G. P. R. Pulman, an English author. Pulman says that: "Let a dry fly be substituted for the wet one, the line switched a few times through the air to throw off its superabundant moisture, a judicious cast made just above the rising fish, and the fly allowed to float towards and over them, and the chances are ten to one, that it will be seized as readily as the living insect. This dry fly we must remark, should be an imitation of the natural fly on which the fish are feeding, because if widely different, the fish instead of being alarmed, would most likely be surprised and startled at the novelty presented, and would suspend feeding, until the appearance of their favoritc and familiar prey." The above appeared about eighteen years earlier than the account by Thad Norris in 1864, and it is not unreasonable to presume, that, unknown to each other, both may have stumbled on the same knowledge around the same time.

In "Favorite Flies," Mrs. Marbury lists fifteen of Halford's patterns of dry flies, with his directions for their use.

That the gayly colored flies as portrayed in her book, were already swinging on the downward cycle, Mrs. Marbury clearly realized. She says that: "As streams have become depleted, and the fish more shy, they need to be fished with greater caution and skill; and there is therefore a demand for smaller flies, delicately tied in colors less gaudy than those needed for the flies used on wild, unfrequented rivers, and lakes."

As we have earlier mentioned, Halford was the guiding light on dry fly fishing, and it is interesting to note that after publication of his first book, "Floating Flies and How To Dress Them" 1886, it was only a matter of six years before dry flies were introduced to this country through the medium of Mrs. Marbury's book.

The first American work on dry fly fishing came out in 1912. Its title was "Practical Dry Fly Fishing," and it was written by Emlyn M. Gill. This excellent little volume added more converts to the dry fly, than any other American work. Gill mentions that: "No longer ago than the spring of 1911, one of the largest New York dealers in fishing tackle—one of the few who have carried a stock of floating flies for a number

of years—told the author, that in his opinion there were not more than one hundred real dry fly fishermen in the United States."

The writer of this article can readily believe the above, for he was unacquainted with the dry fly until around 1920. During the summers of 1918 and 1919, he lodged at John Van Horn's hotel, near the intersection of Trout Run and Kettle Creek, a rendevouz for brook trout fishermen, who gathered there from all sections of the country; and at no time does he recall hearing of the dry fly.

Taking all in all, it was really only a matter of a few years until a regular dry fly wave was sweeping the country. George M L. La Branche's work, "The Dry Fly and Fast Water" 1914, furnished increased stimulus to an ever increasing group of enthuasistic anglers, whose great delight was found in hooking trout that rose to the surface to snap up the daintly cocked dry fly, as it floated serenely down with the current. This was fishing; with thrills from start to finish!

I could not finish this article without referring to that Dean of American fly fishers, Edgar Ringwood Hewitt, whose books, "Nymph Fishing," "Handbook of Fly Fishing," "Secrets of the Salmon," "Telling on the Trout," and "Better Trout Streams," have contributed so much to the development of fly fishing in America. "Better Trout Streams" is a classic, and though widely read, still waits a more discerning day, when its true value will be more appreciated.

With the dry fly now well on the water, the old cycle was rounding out, and a new era in fly fishing was developing. This was brought about in part by the prolific increase of the stocked brown trout, a fish which proved far more able to cope with the inroads of civilization than the native speckled trout.

This new cycle was characterized by the introduction of nymphs,—underwater stages of stream insects—pioneered by another Englishman, Mr. G. E. M. Skues; the use of bucktails and streamers, distinctly an American innovation; and the American discovery of Nylon, a leader material that has already supplanted the silk worm gut used by fly fishers since the year 1724. That the flies required to lure the brown trout—a highly educated fish-had to be a closer imitation of the natural insects than those formerly employed soon became evident. Such old favorites as the Parmacheene Belle, Silver Doctor, etc., were rapidly falling into disuse. To meet this emergency, a closer study had to be made of stream entomology, that branch of fishing which concerns the natural stream insects in all their phases and ramifications.

To date, three such books dealing with entomology, insofar as it concerns the fly fisher have appeared.

The first was "American Trout Stream Insects" published by the Frederick A. Stokes Co. in Philadelphia, 1916, and written by an artist Mr. Louis Rhead. As a pioneer in the field, Rhead's work proved of value, but it is regrettable that the book was not better done. Rhead followed Theakston's nomenclature, which deviated from all English works written prior to that time, on the subject of stream insects and fly fishing. My old copy of Theakston's "British Angling Flies" bears on the fly leaf the signature of

Leonard West, later author of "The Natural Trout Fly and Its Imitation." West had a closer understanding of what transpired before him, and he evidently wished to avoid the pitfalls into which Rhead had fallen, so that my copy of Theakston was checked from stem to stern, interrogation marks being placed under questionable items, as well as many passages being underscored.

The second book published by The Derrydale Press in New York in 1935, entitled "A Book Of Trout Flies," and written by Preston J. Jennings, differed radically from Rhead's work. This book is good; and it is apparent that throughout, Jennings has striven to perpetuate the old and familiar names given to trout stream insects from away back.

The third work published by The Christopher Publishing House, Boston, Mass., 1943, entitled "Practical Fly Fishing" and written by the author of this history, is more or less a collection of articles on stream entomology and fly tying, which were published by Hunting and Fishing, National Sportsman, and The Pennsylvania Angler, from 1933 onwards

This then is the crop. The writer has endeavored to trace the development of fly fishing in America through its various cycles, down to the present time, mainly through the medium of old fishing books, which were handed down from one generation to another. That many more will be written and that far greater strides will be made in the development of fly fishing remains undoubted.

The End

Youth Catches Huge Trout in Small Stream

The largest official catch, a brown trout, was caught in the Branch stream, in the Shippensburg area by Richard Varner, Shippensburg R. R. 1. Richard, a lad in his early 'teens, landed a fish that measured 20 inches in length and weighed three pounds and six ounces when brought to the News-Chronicle office. He said he caught the fish with worm bait. He brought the trout out of the Branch Creek while fishing from the bank close to the bridge which spans the stream in West Orange Street near the Cumberland Valley Cooperative's warehouse and office.

David Hostetter, member of the LSL Sportsmen's association of Orrstown, who spent the early hours of the season angling at Roe Run, said that trout caught there did not measure more than eleven inches in any instance.

There have been no official entries in the Shippensburg Fish and Game Association trout contest to date. According to rules governing eligibility, sportsmens desiring to enter, in addition to being members of the club, must bring their catch to the office of the News-Chronicle where they will be weighed and officially registered. Scott Howard, Queen Street, is the chairman of the awards committee. Three prizes of \$10 each will be given to the three sportsmen bagging the largest species of trout, including rainbow, brown and brook trout.

-Shippensburg Chronicle.

BUY BONDS

FARM FISH PONDS AND THEIR MANAGEMENT

(Continued from page 3)

if these types of plant life are too abundant early in the season, they will continue to be dominant during most of the year and will prevent the maximum growth of fish. By their early elimination through the use of chemicals, the nutrients become available to the fishes.

Since soft or "freestone" waters respond more readily to fertilization than hard waters, it is probable that chemical weed-centrol in them will, in most instances, not be required. On the other hand, the larger-rooted aquatic vegetation thrives in hardwater ponds, particularly in clear water. Despite relatively heavy applications of fertilizer, the vegetation will sometimes develop into growths that are impenetrable to fish, and, when the pond bottoms are covered with such dense growths, productivity is greatly reduced.

Investigations at Leetown, West Virginia, indicate that "water bloom" (water green or brown in color from dense growths of microscopic plants) results from the presence of relatively large amounts of organic matter in the water and frequently follows the destruction of objectionable vegetation by chemicals. It is effective in keeping the coarser vegetation under control.

The two most readily available weed-killers are sodium arsenite and copper sulphate. Sodium arsenite is most effective in controlling the larger-rooted aquatic plants as the pondweeds (Potamogeton) and common waterweed (Anacharis (Elodea)), while small amounts of copper sulphate will readily kill muskgrass (Chara) and objectionable pond scums.

Fortunately, for the farm-pond operator, the margin of safety in the use of these chemicals is large, particularly with the bluegill sunfish and the largemouth black bass, the two species most often used in farm ponds.

In the treatment of ponds with sodium arsenite, 3 to 5 parts per million will ordinarily be required to destroy the larger aquatic vegetation. Most species of fishes can survive more than double this concentration. With copper sulphate, the proportion required is considerably less, not more than 1 to 1.5 parts per million in hard water. It should not be used in soft water, as there is greater danger of killing the fish.

Sodium arsenite is more effective than copper sulphate in destroying surface scums. The amount required is the same as for killing water vegetation.

In connection with the use of these chemicals, the greatest danger to the fish occurs about two to three days after treatment. When the vegetation is very dense, its decay may use up much oxygen, and, unless this is replenished in a supply of fresh water, the fish may die of suffocation. Fresh water is not always required, but should be available in case of need. Livestock should be kept away from the pond for at least three days after it has been treated.

In making calculations of the amounts of sodium aresenite solution or copper sulphate to use, the following basic information will be helpful:

Sodium arsenite solution (Caustic solution containing 4 pounds of As₂O₃ per gallon). One part per million (p.p.m.) requires 1 gallon of sodium arsenite solution to each 64,082 cubic feet of water in the pond.

Copper sulphate solution. One part per million requires 8.3 pounds of copper sulphate (Cu SO_4 .5 H_2O) to 1,000,000 gallons of water. A cubic foot contains approximately 7.5 gallons.

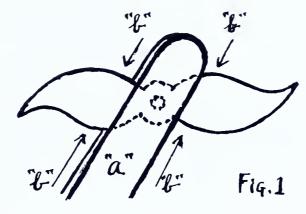
In making the applications, the sodium arsenite may be sprayed over the surface of the water with a tree sprayer or it can be applied with a long handled dipper from a large galvanized or unpainted wooden tub. The solution is broadcast with the dipper in such a way as to spread the solution over the surface. The more the sodium arsenite is diluted in covering the pond, the more thorough the treatment. Sodium arsenite solution should not be allowed to come in contact with clothing.

In treating a pond with copper sulphate, it can be applied efficiently in the same manner described, but should be mixed in a painted tub. Copper sulphate immediately corrodes unprotected galvanized containers.

FISHING THE MIDGET SPINNER

(Continued from page 8)

fect as the die turned job, but it shall be fishable and if even approximately the "op-

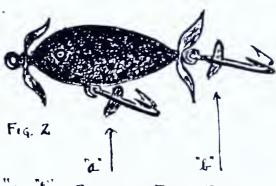


"A" PLIERS JAW "L" BEGIN CURVATURE

posite counterpart" of the other paired spinner. The bait will do no more looping-the-loop. Sounds complicated perhaps, but in reality, quite simple. I've personally turned many such spinners, frequently for friends, a few times for myself. Once confidence has been gained through experience and with the few simple implements mentioned, the whole operation requires but five or ten minutes.

Another and heroic plan, practiced by some anglers, is to remove the rear spinner altogether. These fellows insist the lure will not loop and that it takes just as many fish. I've never tried the idea. Still the manufacturer will generally and quite as positively excuse the added weight of the rear spinner with the thought that, "it helps to confuse the fish," assisting in camouflaging the fraud. So if the one-spinner addict is really getting 'em, I reckon "them just ain't confused fish he's ketching, Mister!"

But we're wandering. This article started out about the Midget Spinner. Returning to the latter, another common practice among my pals in finangling home-made "improvement" is the substitution of double bronze hooks for the rear treble, sometimes the belly hook too. The latter practice is debatable, however. Definitely it reduces the hazard of bottom fouling and loss of precious plugs in these days of wartime tackle aridity. Nonetheless, the upturned double on the belly results in the loss of some poorly barbed fish. Definitely I recommend the double tail hook over the treble. Always with doubles, we slide a bit of jar gum rubber up between the twin shafts, almost to the eyelet. Fig. 2. This bit of rubber acts as a sort of rudder, aligning the hooks immediately as the retrieve begins and maintaining the barbs in an horizontal position at all times. On the bottom double the practice likewise serves to prevent the stingers from cuddling up too closely against belly under pressure of the retrieve, increasing hooking possibilities.



"at & RUBBER PUDDERS.

And now we near the conclusion on this rambling discussion of pumpkin seeds in general, more especially the Midget Spinner, a lure rightfully belonging among the truly great in Keystone State big smallmouth annals. Sincerely I have tried to be fair, endeavoring not to appear unduly enthusiastic of the many truly laudable assets and not to create the impression of an every day, every fish, every condition, and at all times positive sure-fire-killer. Equally sincerely I have mentioned one or two minor criticisms.

Definitely and under most reasonable and propitious conditions the modern prototype of the ancient pumpkin seed can frequently prove to be just about the most toothsome tidbit the angler may serve up to the wary bronze back. But then there's the old rub of that odd other day when on a different stretch of water just a whoop and a holler across the hill, or even on the very identical first mentioned pond, one might just as well toss old Aunt Minnie's busted sugar bowl at 'em. "Impact," my gang would say, "is the fly in the ointment." We're critical cusses. quite positively in our minds we feel the big bait companies have missed the second strike on the pumpkin seed. We should have a 3's oz. fly-weight babe for that other day just a whoop and a holler across the hill. Ditto a midget surface pumpkin seed, spinners fore and after, a high rider, no longer than 214 inches ring-eye to ring-eye, for those long, smooth, mid-season weedy flats.

And tight lines with old No. 6601, Shakespeare's red hot submarine bomber, the fourth to be discussed in my personal hand of top-flight aces and a positive "must" in any well-equipped plugging kit! Further, as I always like to have an extra trump up the sleeve, just in case shall we say, in a month or so we'll discuss the fifth and last, maybe making honorable mention of a backer-up or two!

CANOE CREEK

By Det

Canoe Creek is better known to most natives of Blair County as the Beaver Dam stream, and it is seldom that you hear it referred to by its correct name.

When I was quite young and went to this stream there was wonderful brook trout fishing, however it is now listed as a brown trout stream. Few opening days of the season were missed. The usual procedure was to be driven in a spring wagon to Yellow Spring and then walk some four miles over Canoe Mountain on an old log road. We arrived near the head waters some dozen miles from the railroad station at Flowing Springs, where we could catch a train home at 7:05 in the evening.

It was pretty wild at that time, but after the logging operation, carried on by the Mc-Kelvey Brothers some years later, it was very easy to lose the stream and quite a fight to get back to it. At many places tree tops were left in the stream and long stretches of the stream were unfishable. Trout carried over in this water gained in size and catches of large brook trout were possible.

This valley has been bought by the State and is now game lands. With the passing of the years the stream should open up with the growth of the timber and will become a pleasure to fish again.

On first visiting this water we found the beaver well established and their activities were very interesting. After the logging operation the beaver disappeared and the loss was keenly felt by the fishermen who fought their way to the head waters in quest of the wiley brookie.

When the second growth of timber became large enough the sportsman asked for and received a pair of beaver from the State which were liberated near the old dams. These stayed until the 1936 flood when a couple were seen in the Pennsylvania Edison Dam near Williamsburg. This marked the end of the beaver and they have not been replaced as yet.

The brown trout have taken over Canoe Creek and very few brook trout are taken. Plenty of the fishermen think the brookie should be brought back in the creek, however, it is doubtful if the brown could be eliminated and the two species apparently do not mix in this stream.

A bountiful supply of food produces a good supply of large fish, a number of which are reported each year. While I have never taken a big trout from this water it isn't the fault of the creek.

The most pleasant way for me to fish this stream is with bait, minnow or weighted fly. All produce well and this type of fishing does away with the handling of much line.

While good hatches of flies are present on the stream, it is very difficult to fish and the fisherman who like to cast will find very little in the way of pleasant pastime. A lot of trout are taken on flies of course. Two of the methods used are: dabbling the fly on a short line and floating the flies on a leaf as far as you like and easing them off at the desired spot. Some of the boys become quite proficient at springing the fly to the desired spot. This is done by holding the fly in one hand and springing the rod a certain amount; then let go the fly. This is no game to excite the caster, but I am told it produces the desired results.

Few springs come that a trip or two isn't made to Canoe Creek, usually before the leaves are out too far. I find it more pleasant to fish at this time.

The fellow who likes to get away from inhabited sections may see here deer bound away from the stream at his approach. Perhaps he may see a wild turkey that has come down to water, or he may hear the ruffed grouse thunder away through the trees. Canoe Creek has much to offer. But if you like to take your fishing easy stay on the lower five or six miles. From Bagshaws farm to Canoe Creek, where it empties into the Frankstown Branch of the Juniata River, one will find some open fishing, but it is a good step between those places.

The other streams of Blair County: Bells Gap, Blair Gap, Bobs Creek, Sinking Creek, Van Scoyoc Run are listed as brook trout water and while they afford good fishing it has never been my pleasure to visit these streams. Once a tellow has been educated to the brown trout and the opportunity of tying into a really large fish he has trouble getting to brook trout water.

MUCH SPECULATION ABOUT GREENLICK'S BIG TROUT

The reported failure of those in charge of draining Greenlick reservoir to find any very large trout will be a matter for discussion among sportsmen who have known personally of the forest-skirted lake or have heard of its big fish for many years. The size and "tackle-busting" qualities of the legendary trout have long intrigued fishermen. As a matter of rather common knowledge no large fish have been caught in recent years.

However, the caretaker of the property—now owned by the Westmoreland Authority—is quoted by one of the wardens in charge of removal of 60 trout and "about a hundred bass" as saying that while the lake was being drained he saw a fish—presumably a trout—attempting to make its way up stream, one that he estimated at a yard in length. This is the size reported for many years to have been inhabiting the place.

Many much larger trout than the ones removed by the wardens have been caught by hook and line during the last half century. One displayed some years ago in a window of the former Frisbee Hardware Company here measured about 29 inches in length and weighed seven pounds or so. It was caught by Dr. Orland F. Leighty, now with the armed forces in England, and Dr. Paul D. Luckey of this city. It, like all big ones, was taken at night. Dr. Luckey vouches for the story that when the fish was landed it was not hooked as one would expect it to be; that Dr. Leighty's hook had engaged a broken leader fast to a hook that had been in the trout's mouth-how long no one could tell. About the same time Dr. Luckey says he had one much larger—about a yard long -beside him when it broke away.

Many a 20 to 22-inch fish was taken from the lake by members of the Greenawalt family which lives a half mile above it, along the Mud School-Bear Rocks road. Another who made unusually large catches was Sanford Freed, who lived nearby. Years ago "San" told the writer about getting 14 one night, ranging up to 22 inches. That was long before the creel limit was reduced.

Many a trout was hooked by the writer, none over 16 inches, however. The favorite spot for fishing was where Greenlick run flows into the reservoir; the favorite time at sundown and on into the night, the darker the better.

For several years now, however, persons with permits to fish (the reservoir was closed and posted) have been reporting very poor catches. The introduction of crappie may have had something to do with this falling off. In western states experts on ichthyology have found that where crappie have been planted bass have gradually disappeared, the reason being the alleged destruction by the crappie of bass spawn. This would not wholly account for the depletion of the Greenlick trout population for the reason that before the water company placed a barrier in the stream, just above the lake, in the form of a weir, trout made their way up stream at spawning time. Even after the weir was constructed some leaped over it, say persons who have observed them.

About 45 years ago, or so, the old dam burst during a flood. The water companythe Citizens of Scottdale—constructed a larger one several hundred feet to the south of the old one, which was later dynamited. When the draining process was begun about two weeks ago the stream kept damming up back of the old wall because the outlet was clogged "or something." Rain after rain delayed the draining until finally this week the "thing gave way," just before preparations had been completed to use dynamite. The suggestion was made to a warden that unknown persons might have seined the upper lake. His reply was that the depth of mud and lack of boats would have made it impossible. Furthermore, he said, the caretaker was constantly on the watch.

Another unusual aspect is that while more bass were removed in the draining than trout nobody is known to have reported catching any bass.

When trout were first planted in the lake some 50 years ago they were commonly referred to as "lake trout." Little was known in this region then about rainbows and less about browns which are stocked heavily today by the State Fish Commission. The first shipment was received through the efforts of Bert Laughrey of Scottdale. They were described as "British Columbia lakers." In appearance they were very much like the rainbows caught today in Dunbar and Laurel Hill creeks.

Bass and crappies were introduced only a few years ago—on the sly, it is said.

—Connellsville Courier.

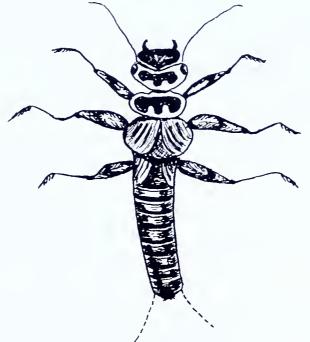
Visitor (in defense plant): "Look at that youngster, the one with the cropped hair and trousers. It's sure hard to tell whether it's a boy or girl!"

War Worker: "She's a girl, and she's my daughter!"

Visitor: "My dear sir, please forgive me. I would never have been so outspoken if I had known you were her father!"

War Worker: "I'm not her father. I'm her mother."

"Now, ladies and gentlemen," screeched the political orator, "I want to tax your memory!" "Great grief!" groaned a man in the audience. "Has it come to that!"



FISH FLY

TIGER STONE FLY



BEAD CADDICE INDIAN



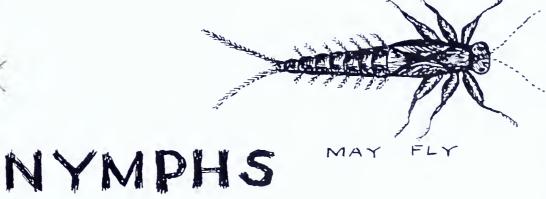
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CADDICE WORM



MIDGE



MAY

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5TH WAR LOAN

Let's Go . . . For the Knockout Blow!

ANGLER ANGLER



August, 1944



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EDWARD MARTIN

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LETTERS TO THE EDITOR

Dear Mr. Fox:

It seems to me that you have been far too moderate in your approval of Charles M. Wetzel's book, "Practical Fly Fishing." Maybe this is because Wetzel is one of your kingpin contributors and Sweigart, who wrote the introduction, was your editor. If so, I will spare your modesty and say myself what ought to be said.

As you know, I am in touch with a considerable number of highly experienced, skillful and well-versed anglers. It is the consensus of their opinion that the Pennsylvania Angler is the best fishing magazine published today.

These same men were highly enthusiastic about Mr. Wetzel's book when I showed it to them and no one has seriously contradicted the statement I made to them and which I now make to you, namely, that this is as important as any fishing book that has appeared in the last twenty-five years, and is as much a landmark in fishing literature as LaBranche's Dry Fly and Fast Water. No angler can afford to be ignorant of the contents of its chapters on stream entomology.

SPARSE GREY HACKLE.

Dear Fred and Van:

I have heard from both of you since the opening day of the trout season. You appeared to have had fairly good luck considering conditions as they seemed to have been. Fishing, you know, is like that, and you must accept the bad days with the good. If all of the days were good, the sport would cease to be a sport. I would love to have been with you those first two days even if the success had been none at all.

You said that you, Fred, had to go way up Cherry before you could do anything. Did they stock Cherry Run with brook trout or were they just not biting? You boys should know pretty well by this time just how well Penns Creek and Cherry Run were stocked. I hope that Penns got a good stocking, for I am planning on a little trip home, and I don't mean perhaps! What cramped your style the first day, Van? Too many punkies, I guess, or was it high water? Both of you seemed to have better luck the second day, nevertheless. Lick and Little Weikert are both good streams. I think I could get my limit in either one any time, although that may be a slight over-statement. There are a few other streams where I am sure I could perform this feat. (Possibly, you fellows don't know of their whereabouts.) There is nothing like a bit of confidence when one can't fish anyway.

You know, boys. I was reading an article yesterday which was concerned with the

streams one finds close to his own home. This writer stated that in the long run real sportsmen, no matter how far they were to travel, would in the end seek their own homes to live in and their own home streams to fish in. I agree with him entirely. You don't like to live in a house which you are not used to living in, and you don't really enjoy living with people whom you do not know well and who have not lived with you. This is just like fishing—you love to fish in the home streams, the streams that belong to you and that you have lived with.

When I dream about fishing my thoughts are generally limited to a few streams which I have fished most of my life. Some of them aren't as good as they have always been, but nevertheless we love them and I can generally catch a few trout from them. One could even say that this desire for certain streams could even be limited to certain stretches on these streams. Isn't this true?

Here are my choices—see how they match up with yours. Sand Run (I caught my first trout there), Weikert Run (I really learned to fish the dry fly on this stream), Cherry Run (this was daddy's stream and I love it too, especially the stretch from the cabin up), the branch of Buffalo (remember our trip there, Van, when you found the deer rack, and we all caught our limit of fine native brook trout), White Deer Hole and Mohn Mill (always a good stream; I used to walk over there with daddy before the C.C.C. camps came in; I learned to fish the worm on this stream), Penns Creek (possibly this stream is my first love). I could name a few more, some better, some worse, but they are not so well known to us. Cherry Run back of Loganton is a fine stream and so is Fishing Creek.

I certainly hope all of you are well and having a good time. I look forward to your letters each day.

Lovingly,
DAVE.

P.S. I certainly hope you have gotten the ANGLER and Game News for me each month.

P.S. Fred, get a camera and take some pictures of you, Van and Daddy on your trips!!!! That's an order!

P.S. Fred—I figures that Union County had about 100 miles of trout water within its borders. How does it compare with your estimate.

(Editor's Note: This is a copy of a letter from David Cadman Johnson, now completing his bombardier training at Deming, New Mexico, to his brothers Fred and Van. These three boys are the hunting and fishing sons of a hunting and fishing father, Judge Albert W. Johnson, of Lewisburg.)

LET'S GO FISHING

By HERBERT HOOVER

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RECENTLY I made some suggestions for an economic and social tidying-up of our country in preparation for the return of our boys from overseas. As I wrote, I was depressed by the thousand mournful voices chanting daily of "postwar problems" in such powerful terms as recovery, reconstruction and regeneration.

But in their research efforts in speech and their labors in type, they all concern themselves solely with what we are to do while we are on their promised jobs. Civilization, however, is not going to depend so much on what we do when we are on the job, as what we do in our time off. The moral and spiritual forces do not lose ground while we are pushing "the instrumentalities of production and distribution." Their battle is in our leisure time.

When the guns cease firing, and the gas comes on again, some of us are going fishing. We American men and boys (and some women) are born fishermen—twelve million of us. We have proved it in bygone days by the annual licenses we took out from thrifty state governments.

We have had mostly to postpone the fishing beatitudes for the duration. Many of us are busy at the military front. Some of us on the home front could possibly get a day or a week off, but the fishing holes can only be approached by automobile or motorboats, and a stern government refuses to recognize that fish do not flourish near railway depots.

In the meantime, I suspect that Mother Nature is making the fish bigger and more plentiful by way of preparing to celebrate peace, and our paternal government is doing its duty to solve our postwar problems by running the hatcheries full blast, turning out billions of infant fish and trying to decrease infant mortality.

I have discussed this important subject in years past, but some review and extension of those remarks are not out of place in these days when we are groping for postwar regeneration. Nothing can stop these regenerative forces.

Even the Four Horsemen cannot stop them. War, murrain, famine, pestilence, dictators, the rise and fall of empires or republics may defeat the game fisherman temporarily, but he rises again to invade the streams and the sea. More people have gone fishing over more centuries than for any other human recreation.

Sometimes the uninstructed and the people who have bad "isms" scoff at the game fishermen and demand to know how they get that way. It is very, very simple. These regenerative impulses are physical, spiritual and economic—and they are strong.

The human animal originally came from out-of-doors. When spring begins to move in his bones, he just must get out again. One time, in the spring, our grandmothers used to give us nasty brews from herbs to purify our blood of the winter's corruptions. They knew something was the matter with the

giving them a pole, a string and a hook. Some wise ones (among them my own) did just that.

Moreover, as civilization, cement pavements, office buildings, radios have overwhelmed us, the need for regeneration has increased, and the impulses are even stronger. When all the routines and details and the human bores get on our nerves, we just yearn to go away from here to somewhere else. To go fishing is a sound, a valid and an accepted reason for such an escape.

It is the chance to wash one's soul with pure air, with the rush of the brook, or with the shimmer of the sun on blue water. It brings meekness and inspiration from the decency of nature, charity toward tacklemakers, patience toward fish, a mockery of profits and egos, a quieting of hate, a rejoicing that you do not have to decide a darned thing until next week. And it is discipline in the equality of men—for all men are equal before fish.

Necessarily, fishermen are gregarious. Otherwise, the mighty deeds of the day or of



a year ago or of ten years ago would go unsung. No one else will listen to them. Also, they are an optimistic class or they would not be fishermen. Therefore, as two or three are gathered together, the spiritual vitamins of faith, hope and charity have constant regeneration. And we need all that in these years of creaking civilization, and especially in the coming years of postwar tribulation.

Nor does this source of spiritual vitamins require any governmental bureau to administer it. All that is required of Congress is to restore our freedom from the fellows who restrict the use of gasoline, and the rugged individualism of the fisherman will do the rest.

give us nasty brews from herbs to purify are blood of the winter's corruptions. They near the water. I asserted years ago that one of the elements in the advance of civiliboys. They could have saved trouble by zation was the progress in the equipment to

overcome the mysteries of fish. We have moved upward and onward from the primitive willow pole with a butcher-string line and hooks (ten for a dime) whose compelling lure was one segment of a worm and whose incantation was spitting on the bait. We have arrived at labor-saving devices and increased efficiency in tackle assembled from the bamboo of Burma, the steel of Sweden, the lacquer of China, the tin of Bangkok, the nickel of Madagascar, the silver of Nevada, and the feathers of Brazil—all compounded into mass production at Akron, Ohio.

For magic and incantations, we have moved forward to cosmetics for artificial flies, and wonders in special clothes, and bags with pigeonholes for everything, including mosquito repellents. We no longer call it a "pole," for it is a "rod," and we no longer say that a fish "bites," he now "strikes."

Out of all this progress, a good fisherman can secure many regenerative hours of winter, polishing up the rods and reels, greasing the lines, and discussing the relative merits of gay-colored flies the dead-sure lures—thereby recalling that Big One from the pool just below the rapids and the fly he rose to.

Nor is fishing a rich man's regeneration. That boy with the worm and a grin is always a reminder that men are equal before fish. However, that boy misses out in one particular that I hope to see attended to in our next era of national reform. There is regenerative joy in contemplating and fondling adequate tackle, which he cannot get out of a collection of angleworms. And his joys are more seasonal because he cannot put in the winter nights polishing up that tackle with its reminder of that Big One from that pool and thereby the renewed smell of battles to come.

I acknowledge to a prominent official an idea to reform this. All boys should be guaranteed from birth to manhood a quart of polish and a collection of tackle with an assortment of special flies. There has been sad neglect in this question of assuring artificial flies to the youth of our land, for flies proved their inspiring worth perhaps four hundred years ago—long before Izaak Walton,

When I was a boy and lived at the social level of worms, a true fisherman gave me three flies—a coachman, a gray hackle and a professor. I treasured them greatly and used them successfully for two or three years—until the wings were all worn off. But there were more fish in proportion to the water in those times.

There are some class distinctions among fishermen. The dry-fly devotees hold themselves a bit superior to the wet-fly fishermen; the wet-fly fishermen, superior to the spinner fishermen; and the spinners, superior to the bait fishermen. I have noticed, however, that toward the end of the day when there were no strikes each social level sometimes descends down the scale until it gets some fish for supper.

This class distinction may perhaps be

ignored in the general reformation, for it is not based on the economic levels. The best dry fisherman I have known is a lady cook at a lumber camp in Montana. She scorned the wet-fly fishermen and rose to indignation at bait.

The swordfish and tarpon fishermen likewise have some social distinctions on the basis of the size of line and reel. The lowerthread line operators are the dukes and earls in that aristocracy. Also, the swordfish and marlin devotees are naturally superior to those who take mere mackerel, amber jacks or flounders. The bonefish fishermen claim a little superiority to the tarpon seekers. But again it is not economic status that counts in such good society so much as knowing what the fish bite.

Someone propounded the question to me: "Why have all Presidents in modern times been fishermen?" It seemed to me a worthy investigation, for the habits of Presidents are likely to influence the nation's youth. Some of us had been fishermen from boyhood and required no explanation. But others only became fishermen after entering the White House. In examining this national phenomenon, I concluded that the pneumatic hammering of demands on the President's mind had increased in frequency with the rising tide of economic and international complexity, and he just had to get away somehow, somewhere, and be alone for a few hours once in a while. But there are only two occasions when Americans respect privacy, especially in Presidents. Those are prayer and fishing. So that some have taken to fishing.

President Cleveland was both a stream and a sea fisherman from youth. His stiff trout rod is still preserved by a devoted fisherman, and it is recorded that his sea-fishing boatman was chosen for silence. Whether President Coolidge fished in his youth is uncertain. He was a good deal of a fundamentalist in economics, government and fishing, so he naturally preferred angleworms. But when the fly fishermen of the nation raised their eyebrows in surprise he took to artificial flies. However, his backcast was so much a common danger that even the Secret Service men kept at a distance until they were summoned to climb trees to retrieve flies.

But I should return to expanding on postwar regeneration and its moral and spiritual values in a gloomy world. Statistics tell us that the gainfully employed have steadily decreased in hours of work during the whole of thirty years. And in shorter hours and longer week ends and holidays, we have devoted more time to making merry and stirring the caldron of evil. Crime has increased. Yet nobody ever was in jail or plotted a crime when fishing. The increase of crime is among those deprived of those regenerations that impregnate the mind and character of

Our Landards of material progress include the notion and the hope that we shall still further lessen the daily hours of labor. We also dream of longer annual holidays as scientific discovery and mass production do our production job faster and faster. But when they do the job, they dull the souls of men unless their leisure hours become the period of life's objective-regeneration by fishing.

Moreover, while we are steadily organizing increased production of leisure time, the production of what to do with it still lags greatly. We do have some great machinery of joy, some of it destructive, some of it synthetic, much of it mass production. We go to chain theaters and movies. We watch somebody else knock a ball over the fence or kick it over the goal post.

I do that and I believe in it. But these forms of organized joy are sadly lacking inthe values which surround the fish. We gain none of the lift of soul coming from a return to the solemnity, the calm and inspiration of primitive nature.

Nor is it the fish that we get that counts, for they can be had in the market for mere silver. It is the break of the waves in the sun, the joyous rush of the brook, the contemplation of the eternal flow of the stream, the stretch of forest and mountain in their manifestation of the Maker, that soothes our troubles, shames our wickedness and inspires us to esteem our fellow men-especially other

Wounded soldiers at the Deshon General Hospital, Butler, tie slies under the expert guidance of Dr. Bernard Hetrich. In the group are: Pvt. Willard C. Barker, Pvt. Curtis Moorehead, Cpl. Paul Jardell, Dr. Hetrich, Pvt. Thomas Mahassey, Mrs. Sarah Bomberg of the American Red Cross, Pvt. John Moore, and T/5, Norman Leiberman.

Photo by Sgt. Arthur Kimmel.



JULY



THAT FIFTH ACE!

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By E. LLOYD KING

THE Heddon River Runt is the fifth and last ace in my series of favorite plugs! Armed with the Midget Runt and in company with the four lures discussed in preceding articles, the average Keystone smallmouth plugger should never really need envy any contemporary kit. Further and differing a bit from several of the earlier entries, the Heddon killer also rates a most potent tidbit to the gelatine eyes of the succulent wall-eye.

Incidently, so as not to create a possible misleading hypothesis, by fifth in the opening sentence I do not indicate a numerical pegging of first, second, third, fourth and fifth choice of baits in the order named! Rather the River Runt just happens to be the last discussed in the series of articles on favorite smallmouth poison. Perhaps, too, I employ the Runt more especially the latter part of the season . . . no doubt due to local stream peculiarities . . . equally plausible on account of personal whimsies . . . therefore, the deadly little bottom dipper rates more than deserving in being accorded the honor of the concluding chapters.

The River Runt does not need any special eulogy or introduction. Most every angler recognizes the little chugger at sight. In happier pre-war days, practically every tackle store prominently displayed the series, and at the moment the lure stands credited with the largest smallmouth ever officially on record in this state, a 7½ lb. second prize winner, 1943 Field and Stream Big Fish Sweepstakes. Worthy of note too, three of the first ten winners in the identical division were credited to the Runt!

Now as to origin, case history, development, steadily increasing use astream, et. al., the River Runt places with the veterans in fisherdom, the first wooden model having been brought out quite many, many moons ago. Immediately successful that wooden model, the No. 110 series, continued on down through the years and was still in goodly demand and being made when the Dowagiac boys turned their attention exclusively to Hitler, Tojo and Company.

However, in the interim a more modern

model came into being, Runts made of cellulose acetate, nowadays the commonest on view in our Pennsylvania tackle kits. As a matter of interesting and perhaps generally unknown fact, Heddon claims the honor of pioneering the application of paint to the cellulose acetate bodies, a most discouraging chore at first and with many obstacles to overcome.

Immediately, the Shore Minnow finishes became very popular. First named X-ray and intending to suggest the little transparent shore minnow, a favorite food with black bass and indeed most game fish, the semblance of a fishy backbone outlining plainly through the body, this finish no doubt seems very lifelike to the finny quarry—pretty darn important when one stops to consider the big gamesters usually view the lure against the light of the sky, from below or at least slanting upward: also that most small food fishes are reasonably translucent in the same position.

As regards the procedure in achieving the varied markings, a subject of never ending conjecture at the tackle store counter, the designs on the bait are applied with a mask, the paint being blown through the screen unto the lure, arriving at the various patterns, a full two score and more in several of the related series.

Briefly the River Runt series boasts a half dozen or more closely related models. There's the original No. 110 series, a ½ oz. slow sinking plug. Also there's a 3/5 oz. floater, riding the surface when at rest, diving two or three feet on the retrieve. There's a snazzy little cousin, the 2/5 oz. Midgit-Digit, something really small. There's a "No-Snag" and a "Go-Deeper" River Runt. And two jointed models, proto-types of the singles, one a floater-diver, the other a slow-sinker, each with a lively snake-hipping side-kick wiggling action. And lastly the favorite of this correspondent, the teasing, tantalizing, killing 3/8 oz. Midget River Runt Spook, No. 9010.

As most readers of the magazine already know, this fisherman and his choicest pals set their collective sights at bantam weight, midget lures. It is our rare good fortune to work some of Pennsylvania's greatest smallmouth water, from whence originate many of the Commonwealth's finest; likewise water which may be pounded perhaps twice as hard as any other in the state. To arrive at an age of nine or ten or twelve years and real old sockodologer proportions, a bass or wall-eye must needs have inspected and refused many hundreds choice barbed offerings, not to mention fisherman . . . and likewise become properly educated thereby. To save argument, big Pennsylvania bass are cagy bass! They've hunted food for a long time and become thoroughly attune to the usual properties of nature! Anything hitting the water with more disturbance than that of a big insect spatting down draws our collective angling suspicion; we strongly feel that small size has little merit if accompanied by sodden, leaden, lifeless impact, as a matter of fact sad experience has long since hiked our views far beyond the suspicion stage.

Thus definitely we set our sights at light tackle and 3/8 oz. lures . . . with only one compromise we shun the heavier field . . . and therein our high regard for the aforementioned Midge-River-Runt-Spook, 3/8 oz., slow sinking, lively swimming, deep riding, lightest of all the true runts and smallest too, in the latter regard excepting only the cousin, Midget-Digit. And as indicated, with us the little fellow rates most important at the fag end of the season when big bass seek deep water, and in the same ebbing, frost haunted weeks on our wall-eye eddies and pockets. More of that later.

With most of the lures discussed, we have finangled at times on a little homespun "improvement" aimed at making stock models more adaptable to peculiar local needs. We've changed color, hooks, implacement, head spoons, spinners—what not? On the Midget River Runt, however, we recommend only one change for average angling; to whit, bronze double hooks, belly and tail, instead of trebles. Reason . . . to conserve lures. We find double upturned hooks do not foul the bottom so quickly, and grasp the quarry

just as firmly and well as trebles if properly set. Incidentally with big fish unusually cagy, we disdain boat disturbances and associated shadows; if possible we much prefer to make the cast while wading or even from the shoreline. Bluntly, while the boatman may easily retreive snagged lures, and at the same time ruin the fishing thereabouts for a goodly spell, the wading angler has little chance to dislodge a "tight" plug in deep water. Decidedly and again, I recommend double hooks, belly and tail.

Just as retailed in the Midget Spinner article, we rudder the double hooks with a small bit of jar gum or other rubber, wedged firmly between the two shafts of the double and then pushed up almost to the eyelet. Regardless of how clumsily the cast may land, ordinarily as the retrieve begins these tiny rudders will quickly align the hooks and hold them thus, even while chugging along atop the small stones and ridges on the very bottom.

Now as to fishing the Midget, Keystone style. At some places where big bass seek the cool springs at the bottom of deep holes and the very deep bends, fishermen employ the Runt from the first day of the season. Likewise the lakes, the dams, the big impounds, anywhere it is necessary to go down after them. Therefore, we carry the bait, throughout, just in case.

Then comes late August, early September, cool nights, cloudy misty days, big fish on the hop, and we begin to sidle noiselessly around the heavy holes and the deeper ledge pockets, casting down or across, quartering in turn, probing the depths all around. Mostly with the Runt I do not recommend the silent dive cast; maybe at times a light modification thereof. The Runt seems to work best of all when spatted down softly . . elevating the rod tip slightly before impact . . . then quietly letting the lure sink, measuring the action to a theoretical count of eight or ten or even fifteen, depending upon the water depth, all the while slowly taking up any slack. Once sensing the lure as being at or near the bottom, the rod tip is jerked sharply upward, repeating the act time after time in a staggered series of twitches, working the bait homeward as slowly as possible.

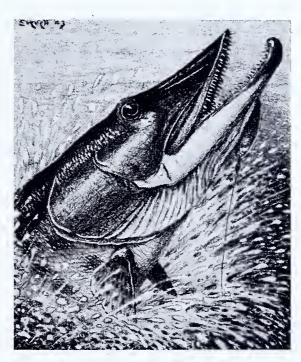
Another method, and I personally consider it best of all in walleye haunts, is to make the identical cast, let it sink, then point the rod tip directly at the bait, reeling slowly and steadily, chugging the wiggler right on the bottom, so much so that the bobbing along is plainly discernable in the slight telepathic vibrations of the line and reel handle.

A third and kindred operation, indeed a combination of the two just retailed . . . after completing the toss, I like to aim the rod tip at the lure, jerk the tip and reel in the slack, continue the retrieve another foot or two perhaps; then jerk and reel, jerk and reel, etc. The one thing to remember on the deep-riders seems to be patient deliberateness in retrieve. Overweight, sometimes over-fed, gradually stiffening, pre-hibernation smallmouth are seldom very aggressive, no more so than the sodden, heavy fight they usually offer. Angling too fast it is readily possible to pull an "interesting" lure right away from a sluggish honor fish. And our friend the wall-eye, Susquehanna Salm-

on to the South Central river angler, has ever insisted his tidbit be served up with a rare calmness. Hurry the retrieve and forego the wall-eye.

Of course, as explained the above remarks are aimed at our common method of angling, big creeks and wadeable river channels. I understand where the Runt is used a great deal in the warm months; very deep water, the lakes, the impounds, the heavy holes or bends in rivers and big streams, the cadence of rod and reel may be varied greatly to suit the mood of the fish, generally trying the usually successful slow chugging method first, then if the former does not produce satisfactory results adapting the retrieve to a more rapid or even fast pace.

All in all, however, retrieve may not be properly imparted on the printed page; that's a stream side chore, trial and error. Once fishing, the angler must learn to hold himself in check, try varied and sundry little dipsy-doodles, restrain the nervous impulse to get the cast over so as to make



All the members of the pike family strike well in the fall. The first frost seems to pep them up and put them on the feed.

the next, a hoped for "better one," and to remember the fish are not in any hurry. Or better still in illustration, an old, old axiom which I first heard when a mere lad down Adams County way many, many the year ago, and from an old, grey goateed, thoroughly bald, hermit darky, the stored up wisdom of many years fishing to fill the shanty frying pan: "Feesh slow! Jes' sloo-o-w! Mah! Oh, Mah! Jes' laker y'ar ole black babe laps at 'lasses pone or de white sweet sixteen filly an' her very furstest beau trapsies to home from th' quiltin' ovah yondah frum Missus Beard's place. Jassuh, Ah seed 'em! Slooo-oo-ow-lak, Mis' Billy King, Jes' slo-o-o-o-w-lak, thass' wot! Ha! Ha! Ha!"

Now I've never actually witnessed a year old pickaninny lapping 'lasses corn pone nor even a sixteen year old white honey wending her way homeward along a snowbound, moonlit country trail, with her first gallant, but my imagination provides a sufficient word picture. No hurry! Plenty of time!

"Jess slow-like," as a matter of fact, hardly moving at all!

Of all the finishes, I personally prefer the Pike or Perch, all this despite the great over-all popularity of the "Shore-Minnow" dressings. Just old-fashioned, I guess! Well I remember the first two Midget Runts, recommended by my sojourning pal Alex Sweigart, pre-doctored and furnished by my good friend Charlie Fox, one a Perch finish, the other a Pike. With these I took my first really big wall-eyes, and incidentally even nowadays the identical two veterans, still in mighty fine repair, are usually first on the leader when around the haunts of old gelatine-eye. So perhaps my preference may just be loyalty to old pals, after all!

And now shall we reminisce? May we pardon an oldtimer's musings? It's September! Along the river banks, the dying canopy of endless golden rod runs on and on in an enchanting chain of pungent yellow glory. Not far distant, majestic and silent, guardian angels against wintery want, the rustling, military rows of corn shocks align the browning hillside, the latter dotted here and there to almost checkerboard precision with the lush mellowness of fat, portly pumpkins. And along the briar studded cowpath, to the sly delight of the little, starchly collared teacher's pet, the summer rambo has ripened and fallen; and nearby beckons the blushing cheeks of the oldfashioned smokehouse.

Yes, it's September! There's a sharp twang to the pre-sunrise air. The summer grasses have uprooted and departed the river flats. the moss has gone from the creeks. Fresh, autumnal zephyrs whisper and pull at the lowered sleeves and the billowing shirt-back. Like so many minute scurrying sail-boats, dead and dying leaves whisk across the glassy waters; picturesque rainbow hued counterparts skirl in playful arid whirlpools about the tiny hickory thicket. Yet, at midday the sun is quite warm, often even hot. Insects buzz, and the dreamy blue horizon basks coyly amid a smoky, hazy allure!

With reverent wonder, the chance dreamer can sense the presence of Spiritland along the Juniata and Susquehanna bottoms. He feels it all around, the teeming saga of the ages, the endless song of America. And then! Over there! What's that? Peering intently, he visions stealthy movement up against the highest pinnacle of the crags, the ebbing staggered spiral of the signal fire, the ghostly file of dusky raiders slipping along in cruel painted mockery, Oneida, Onondaga, Seneca, Cayuga, Tuscarora, the subject Delaware, many of them far away from their home lodges about the northern lakes. There's Red Jacket! And Cornplanter, the Mohawk, fiercely implacable! Peter Martin! Hendrick, hatchet red! Even Joseph Brant, English educated, Chief of all the Iroquois, he who led them to their bloody doom. There too furtive, boastful Girty, white savage, born native to these very bottoms.

Ah-hhh-h-h-h!!! Following! A chill courses the spine! The Black Hunter! Silent and vengeful, glorious though pathetic, like a bloodhound on the track, the mysterious raven destroyer already on the trail of the pillaging scalp hunter. 'Ere another sun

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SELECTING AND BALANCING BASS FLY RODS

By WILLIAM M. THAYER

LY rod fishing for black bass is very interesting and is becoming more popular each year. At present bamboo bass fly rods are made in lengths of $8\frac{1}{2}$, 9, and $9\frac{1}{2}$ feet with various weights and actions. Some rods are designed for casting the lighter lures such as wet flies, dry flies, and streamers; others are designed for casting bass bugs, bucktails, and spinners; and still others are made especially for large fish and severe service. Casting artificial lures is a very popular way of fishing with a fly rod for black bass. However, many anglers use powerful fly rods for strip casting, still fishing, and trolling or drifting with live bait. There is no rod that can compare with a fly rod for handling live bait and playing fish and the angler who uses one gets a lot of enjoyment out of his fishing. Since suitable tackle is vital to one's success, it is important for the angler to give special attention to the selection and balance of his fly rods.

Hooking power is an important factor to consider in the selection of a bass fly road. A fly rod that is too whippy and lacks sufficient backbone is of little worth when angling for black bass. Such a rod with the proper backing and manipulation, will kill black bass efficiently enough, but it does not have sufficient strength for constantly lifting the lure off the water in preparation for another cast and for hooking bass. A bass fly road must have plenty of backbone if the barb of the hook is to be set in the hard and heavy jaw of a bass. In weedy places, it is especially important that bass be securely hooked or they will dive into the weeds and free themselves.

Action and balance are important factors. Action and balance are more important than weight in a flyrod. An even action rod has a gradual increasing bend extending from

the hand grasp to the tip end; a tournament action rod has heavy tips with a strong second joint and is usually stiffer and stronger than other rods; a dry fly action rod has fast tips with a stiffer butt and midsection to give strength and backbone to pick up a long line, or cast into the wind. In selecting a rod, see that it is straight and has no places which bend too much or too little. It is well to try several rods of various weights and actions until one is found that has a strong middle section and heavy tips with a fairly stiff action. In order to cast bass bugs and the heavier fly rod lures, one needs a rod with strong sections. A dry fly rod is apt to have too light a tip for casting such lures. Always put a reel and line on a rod when testing its action and balance. If possible, try casting with the rod. Care should be exercised not to select one that is top heavy and too stiff, especially when considering a tournament action rod. The wrist and forearm will commence to ache after a few hours of casting with a top heavy rod.

The proper fitting of the cork handle or grip of the fly casting rod to the hand is an important factor. A grip that is too large or too small will soon tire the caster and is very likely to cause cramps in the hand and fingers. Perhaps a half Wells or a tapered grip with a thumb rest is the most comfortable one to use where considerable force is required to handle the rod.

Length and weight are important factors. A 9 or $9\frac{1}{2}$ foot fairly stiff action fly rod weighing 6 to $6\frac{1}{2}$ ounces is needed to securely hook and withstand the surges of black bass in places where there is heavy vegetations. Personally, I prefer a 9 foot $6\frac{1}{4}$ ounce fairly stiff even action rod for use in such places. In more open water, a 9 foot $5\frac{1}{2}$ to $5\frac{3}{4}$ ounce even action rod, that

will handle a D level or a HCH tapered fly line, will be more comfortable to use. This makes a splendid all-round rod for bass, trout, and pan fish. It would be ideal for an angler to have both rods for his fishing. There is such a big difference in casting with these rods that it is quite restful to change from the heavier to the lighter rod. The heavier rod works well with large bass bugs, bucktails, spinners, and live bait. The lighter rod will handle either wet or dry trout flies. bass flies, streamers, and with reasonable care will not be damaged by fishing with spinners and small bass bugs. If an angler wants only one rod, he should select a 9 foot 6 ounce rod with a medium action. This rod comes the closest to being an all-round fly rod of any rod for bass. However, it is heavier than one needs for casting small dry flies and other light lures.

It is helpful to know the opinion of others regarding the length, weight, and action of bass fly roads. A recent survey shows that a large majority of anglers prefer 9 foot rods with weights ranging from $5\frac{1}{2}$ to $6\frac{1}{2}$ ounces. While some anglers use tournament action rods, others prefer even action rods with various degrees of stiffness. One manufacturer said-"A 9 foot stiff action rod is by far the most popular dry fly rod, bass rod, and salmon rod. Up to five years ago the 91/2 foot rod was more popular. The sales today will average more than one hundred 9 foot rods to one 9½ foot." Some anglers use a 91/2 foot rod for casting bass bugs and spinners. They claim that the added length of rod gives them better control over their lures and makes the casting easier while seated in a boat.

Perhaps a brief summary will be helpful to the novice:

- 1. Always put a reel and line on a rod when testing its action and balance.
- 2. Too whippy a rod lacks sufficient backbone and too stiff a rod is tiresome. A rod with a fairly stiff or medium action will be more comfortable to use.
- 3. Action and balance are of first importance, yet a rod must have sufficient weight and length.
- 4. Gently whip the rod and see if it vibrates smoothly throughout its entire length. In casting there should be no decided kick to tire the wrist and no side-weave to impair accuracy. If a rod comes quickly to rest after vibration, it should have good hooking power.
- 5. Either an even action or a tournament action rod is preferable to dry fly action rod for black bass.
- 6. If an even action rod is selected be sure that there are no places that bend too much or too little from the hand grasp to the tip top when pressure is applied.
- 7. If a tournament action rod is selected be sure that the rod is not top heavy and too stiff.
- 8. Be sure that the rod has a comfortable hand grasp of sufficient length so that the position of the hand can be changed.
- 9. A large majority of anglers use 9 foot rods weighing from $5\frac{1}{2}$ to $6\frac{1}{2}$ ounces al-

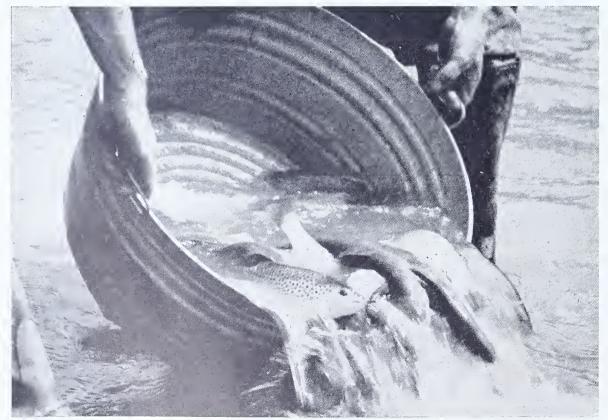


Photo by George Richards.

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MID-AUGUST PLUGGING

By LEE H. DIEHL

CONODOGUINET CREEK is justly famous as a bass stream. However, it's bass, like the bass of most other streams, are moody and highly unpredictable. During such "off" times it takes patience, perseverance, and a considerable degree of skill—not to mention luck—to make good catches by any method or combination of methods.

During mid-August 1943 the Conodoguinet was warm, low, clear, and generally just right to torture the soul of any ardent angler and especially one whose faith in light lures is boundless. It was during this disgusting period that I chanced to have a four-day vacation with headquarters in Shippensburg. Due to the shortage of gas it was a case of fish when I could and as close to home as possible. Consequently plugging was confined to a stretch of the Conodoguinet between Newburg and Newville.

Much discouraged by local angling friends who one and all voiced utter hopelessness concerning fishing prospects I decided to try my luck at Thompson's, one of the hardest fished stretches in neighboring waters. This part of the creek is a typical "flat" with water two to four feet deep on one side and much less than that on the other.

First choice as always was old 968P my pet Midge-Oreno. No luck. From then on I tried Midget Spinners, Dopeys, Johnson Spoons, Jitterbugs, in fact almost everything in my kit. After three hours of desperate, and no doubt demented fishing I lost hope and decided to move.

As I was getting into the car I noticed a Flatfish, flyrod size, resting on the back seat in lonely grandeur. Well—that was one I had never before tried—maybe it would work. How to use it was a problem since I had no fly rod and consider added weights

an abomination. Might as well experiment so tied it on as was. First cast a birdsnest. Second likewise. Just too light to be cast by conventional methods. However, after much experimentation I managed to cast more or less regularly from 40 to 70 feet. Perhaps throwing would be a better description of this strictly unorthodox plugging for it was about three-fourths arm and one-fourth wrist. Using a slow and very erratic retrieve I refished the water I had just quit catching five bass and losing four, nothing large, nothing small, 12-16 inches. One of those lost might possibly have hit three pounds.

Next day had a date with friend C. L. Crawford light lure convert and the most persistent fisherman of my acquaintance. We agreed to continue my experiment of the day before, he to provide a check on me by using any plug of his choice except the Flatfish. Net result over four miles of stream was thirteen bass, nine for the Flatfish and four for Crawford who elected to stick strictly to the Midge-Oreno. The only decent fish of the day fell to Crawford. This was a 20 incher which he caught while surface fishing his Midge.

During the following two days we used much the same procedure, caught plenty of bass, and arrived at some tentative conclusions as the result of our experiment. They were (1) the Flatfish, flyrod size (regular plug size Flatfish were tried without success) is definitely a fish getter; (2) it is darned hard to cast but worth the effort; (3) it is adaptable to many methods of retrieve and to many uses, and (4) it can be improved by replacing factory made hooks with larger ones.

While the manufacturers obviously did not

design this little plug to be used with the short rod they definitely have something. It is to be hoped that, after the war, the manufacturers will increase the size slightly, use heavier wood or plastics, use larger and heavier hooks, and generally adapt it for short rod use. If this is done it will make an ace lure for creek smallmouths.

During the four days in which I used the Flatfish exclusively I caught one 19 inch bass, one 17 incher and several between 14 and 16 inches. Just the same it caught more small fish than one would like. In fact more flyers hit it than any other plug I have ever used. Just what this means I'm not at the moment able to say.

A moment ago I mentioned adaptability. Two examples are worth noting. A number of fish were caught by just letting this little plug hang straight downstream in moderate current. This method was especially successful where large submerged rocks breasted the current. It was possible to stand almost any distance above the rock and work the plug over and around any such likely spot and still move the lure but a short distance. Sort of a teasing process.

The other method was by the very nature of the thing a "come on" method. Numerous times Crawford with his Midge-Oreno fished a likely looking stretch without success. I followed with the Flatfish likewise without success. On retracing the same water his Midge would produce where ten minutes before it was fishless. Occasionally when we were fishing very close together our lines of retrieve would merge and we would both get strikes. This never happened unless the Flatfish was being retrieved ahead of the other plug. At times we fished side by side

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512 Youngsters compete in Kiwanis Lake Fishing Contest at York. It was a gala day—especially for the lucky youngsters who won prizes. 15 fish were caught during the afternoon. Rods and lines and bait were furnished by the chapter. As usual the biggest one got away. It was reported that one boy succeeded in landing a 23 inch carp. In the excitement of getting his picture the fish wriggled off the hook to everybody's chaprin. Waltonians: Faris Barnhart, H. J. Deveney (chairman), W. W. Leiphart, George Forest, Raymond Strine, Geo. Leiphart, George Lucas and Edward Schneider were on duty assisted by John Ogden, fish warden, Elmer Turner, game warden, Harry Oaks, dog law enforcement and from the City Recreation Department: Margaret Swartz, Supervisor, Mrs. Romaine Lightner, Mrs. Fannie Kopp and Mrs. Evelyn Becker. Pete Deveney secured the prizes and overhauled the equipment in preparation for the contest.



IT'S ALL TRUE, SO HELP ME!

By WILLIAM J. ELLIS, SR.

DOC stretched lazily in his arm chair, blew a couple of smoke rings at a mounted channel bass, that once boasted of a mailing address in the surf off Chincoteague Island, deposited the stub of his Ramasees cigarette in an ash tray, along with eleven other similar stubs, squinted over at Joe, and remarked: "I never did believe that story about Jonah swallowing the whale, even if it is in the Bible!"

Joe started to laugh; choked over an orange seed, that had gotten mixed up with his "old-fashion"; and blurted out: "Doc, you're crazy! Jonah didn't swallow the whale! It was the whale that swallowed Jonah."

"Oh!" Doc exclaimed as he paused to light up his thirteenth Ramasees, "So, the whale swallowed Jonah!" Blowing out his match, he grunted: "Hell! Any dope could a'had that happen. I thought he swallowed the whale!!!"

Just then there was a knock on the door and another member of the "Gas House Gang" walked in, announcing that he was thirsty. Doc had to stir himself long enough to attend to his duties as host, while Joe laughingly told the newcomer about Doc's misinterpretation of the Jonah and the Whale story. This brought forth a smile and the rather terse remark that either way, it sounded like "another fish story."

Another fish story! Huh! Why does everybody label something they don't believe as "another fish story." The angler may exaggerate a little to make his story more colorful, or he may give way to his vivid imagination, but what if he does? It wouldn't be much of a story if he didn't; and furthermore, the man without any imagination isn't worth knowing.

When a group of fishermen get together, I like to be there, especially when they start relating some of their "actual experiences." And I do mean actual, for most of them rep-

SAM'S CASTING BASS

resent some unusual adventure that, although it may have become slightly distorted in the repeating is, nevertheless, very real.

Take for example Sam Weitz's "Casting Bass." Remember that man-bite-dog stuff as a news item. Well Sam applied this same principle to his bass story, and to vouch for his veracity he took along Tom Mullen. It's a good thing he did.

Sam had a new light casting rod, and being proud of his ability to put a plug wherever he wanted it, was amusing himself casting at various floating objects within a relatively close radius of the boat. Suddenly, Wha-a-a-a-a-am! A bass struck with the savage force of his salt water cousin, the striper. Sam was caught napping.

Evidently the bass had been hanging around the boat for some time watching Sam practice, and decided to give him some competition for, according to Sam, that bass leaped about a foot above the surface of the lake and threw the plug right back into the boat.

At first Sam was dumbfounded, but then, attributing the incident to meer luck, he decided to do his casting a little farther away from the boat. So-o-o-o, aiming at a lilly pad some forty odd feet away, he made a perfect cast right beside what looked like a natural fish cover. It was! The bass (it must've been the same one) grabbed the plug the instant it hit.

"If he throws it this time, he's gotta be good, muttered Sam as he started to set the hook. But Sam didn't know that bass! Not yet. at least. After playing around a few seconds, breaking water a few times to get his bearings, the bass made one final leap.

He came out of the water almost perpendicular. At the peak of his leap his body seemed to hang suspended in mid-air; then, with a quick snap of his head, he again threw that plug. Straight and true it traveled back toward the boat. Both Sam and Tom had to duck to keep from getting the triple-hooks caught in their anatomy.

As Sam reached down to pick up the plug from the bottom of the boat, Tom swears he saw the bass come to the surface, close to the boat, and solemnly wink its eye. That may have happened, but it sounds kinda fishy to me.

If the story had ended at this point, it still would have been good; but Sam wasn't the kind of an angler to let any poor fish get the best of him . . . let alone show him how to cast. This time he sharpened the hooks and stood up in the boat.

The cast was perfect. The plug hit the water about ninety feet away with a splash that would have attracted the attention of any kind of aquatic life in the entire lake. The bass had a little more trouble locating his prey this time . . . he hadn't expected Sam to sling it quite so far. Finally he located it, and just to tease Sam, he started slapping it with his tail.

Sam, however, was too cagey an angler to allow himself to be tricked. He just let it rest on the surface, applying practically no action at all. If there was to be any teasing, Sam was just as capable as the bass.

Then came the strike! Wotta wallop! Wotta fight! With the tail hook embedded in his powerful jaws, the bass dived clear to the bottom of the lake. Then, just as sudden, he came to the surface. He dashed to the right, to the left, and for the next five minutes he kept Sam so busy that a taut line was impossible.

Finally he decided it was time for the "pay-off." Watching his opportunity for enough slack line, he suddenly jumped clear out of the lake, landed on top of a huge water lily, and stood up erect on his tail. It all happened so quick that Sam didn't even have time to reel in the slack.

Balancing himself like a professional toe dancer, the bass swung that plug around his head a couple of time, then pivoting on his tail, he turned in a complete circle, and putting every ounce of his strength into that cast, he let-go.

Reading from an entry in the annals of Sam's piscatorial adventures: "That plug not only traveled the ninety odd feet back to the boat in two seconds flat, but landed right in my open tackle box, and finally came to rest in the same compartment from which I had taken it when I started to fish. I left it there."

And remember, Tom Mullen was right there and saw it all.

Icthylogists, although they won't admit, frequently learn much about the habits and customs of fish from these unusual experiences of sportsmen. One very good example of this was the time Joe Willard, financial executive of The Dover Fishing Club, caught a Banded Runner, (Seriola Zonata) off the Margate Fishing Pier. Now the Banded Runner is a very rare species of piscatorial life, and no existing records showed that one had ever before been taken along the New Jersey coast.

Of course, Joe was elated over his catch, so he decided to bring it back alive. Pur-



chasing a small glass aquarium at a nearby pet shop, he filled it with salt water and therein deposited this rare beauty. It was his intention to present it to Dr. VanDeusen, superintendent of the Fairmount Park Aquarium, who is always on the look-out for some extraordinary type of marine life.

That night Joe left the Banded Runner on a table and retired to dream about seeing his name on a brass plate in the Aquarium, eulogizing his unusual catch. His daughter, however, feeling sorry for the captive fish, and thinking it must be hungry, decided to feed it before she retired. So, spotting a large bottle of Vitalis among Joe's tonsorial requisites, she immediately inferred from the name that it contained vitamines, and poured a rather generous quantity into the Banded Runner's temporary quarters.

No, you're wrong! It didn't kill the fish. but the next morning when Joe went to admire his rare captive he could hardly believe his eyes. In fact, if it hadn't been for Doc Hankinson using his influence, Joe would 'ave signed the pledge right there.

Overnight the Banded Runner had grown a full beard, a handlebar moustache, and it's entire back was covered with curly brown hair.

Doctor VanDeusen kept the bewhiskered fish in the Fairmount Park Aquarium for some time, but the attention it received from visitors made the other fish jealous, so one day they ganged up on it and . . . Joe carries a lock of its hair in the case of his watch.

The real angler of today scoffs at bait. He uses artificial lures. Says that they're more sportsmanlike, and fooling the fish, gives him the sensation of being clever. It remained, however, for Bert Bennett, the well-known surf caster, to show up some of these sporty fishermen and beat them at their own game. Bert just uses a plain hook.

That is, it looks like a plain hook, but I've always believed that Bert has some kind of a charm he puts on it just before he starts fishing. Or, maybe he just says a prayer, but it certainly works. To fully appreciate the story, you've gotta hear Bert tell it himself. So, we present the hero in person:

"For years I had been trying to catch a channel bass without any luck. Whenever the channel bass were running, I would be somewhere else. Several times I made special trips when I heard they were in, but I always arrived a day late, or at the wrong tide, or sumpin.

"One Sunday morning back in 1924 I walked into Earl Fletcher's bait shop to chew the fat for a while and probably hear a little fishing news. As I entered Earl was sweeping out the store."

"Wassamatter Earl! Not closing for the day, are you?" I asked.

"Yeah Bert. The channel bass are running down at the Mud Hole. Going to beat right down there and get a couple."

"The Mud Hole? Where's that?"

"You go to Longport, then across the second bridge toward Sommer's Point, and walk to the left 'bout half a mile across the mud flats. Tough spot to reach, but when they're there, they run big. Just heard there were four caught there last night."

"What are you using for bait?" I asked.

"Shedder's the best. Though they'll probably take anything this time of year."

"Gimme a dozen. I'm going too."

"With a box of Earl's fresh shedder crabs under my arm I hurried back home; threw 'em on the seat of my car; got my surf rod, some tackle, and hip boots; and in twenty minutes was on my way to Longport. One and a half hours later I was parked by that second bridge, putting on my boots.

I didn't have much trouble finding the Mud Hole, but to my disappointment there was only one man there and he was just leaving. He had a beautiful bass that weighed about forty pounds. "Leaving so soon?" I queried.

"Tides running out now, not much use staying around any longer" he replied.

Too late again! What Luck! All primed for some real sport, a box full of the best bait you can buy, and the fish were on the egress. "Hell!" I said to myself. "I'm here and I'm going to fish."

"I was all rigged up with a brand new 10-0 O'Shaunassay hook ready to put on some bait and go to it. First, I thought I'd throw out and wet my line. So, without bothering to put on any bait, I tossed the lead about forty feet out into the bay. I just started to retrieve when my hook caught in something.

"Blankety-blank-blank!" I exclaimed. "Just my luck to snag an old log and lose all that tackle."

Pointing the tip of my surf rod at the (Continued on Page 16)



Edward Figorski caught this fine rainbow trout in a small stream flowing through the suburbs of Philadelphia.

SPORTSMEN'S HERITAGE

By JOE O'BYRNE

This is the first of a series of articles on conservation subjects of Statewide importance prepared by those who conduct the outdoor columns in the newspapers of Pennsylvania. Joe O'Byrne is the hunting and fishing editor of the Philadelphia Inquirer.

THE NIMRODS and anglers of this country are becoming increasingly alarmed about the growing shortage of places where they can go to hunt and fish. Year after year more lands and waters are closed to the public which means fewer streams and less lands for the sportsmen to use.

In bygone days the whole countryside was open to hunters and no one paid any attention to a strange fisherman who was looked upon as a harmless sort of individual, as he wandered along a stream dunking his line, with worms and live bait, or sloshed through it casting his flies and lures. Then the good neighbor policy meant just that, and no one ever thought of posting his lands. People in the country welcomed strangers, as they were a source of revenue, and there

was an unwritten agreement between the farmers that their guests could hunt or fish anywhere on each other's lands. In those days a hunting or fishing trip was an event planned away in advance, and arrangements made to spend a couple of weeks at some farmhouse or inn in a remote spot near good hunting or fishing country.

When the use of automobiles became so prevalent all this changed. The outstanding hunting and fishing spots were overrun with newcomers who packed their lunches, left home before dawn and then returned late in the afternoon or early evening in time for dinner. From these people the natives and farmers got nothing, so to protect their regular guests they began posting their lands and streams, and to offset this, groups

of sportsmen started to buy up and lease streams and lands where they could fish and hunt.

Slowly but surely marginal lands, fields and forests that provided food and cover for birds and game, were posted with the familiar "No Gunning" placards. One by one the trickling streams, shady brooks and sprawling creeks that furnished any semblance of good fishing were plastered with "No Fishing" notices. This practice continued until today these ubiquitous "No Trespassing" signs seemingly advertise the fact that while wonderful recreation is close at hand, it is impossible to take advantage of it, and the hunters and fishermen are deeply concerned.

(Continued on Page 16)

Joe O'Byrne, Philadelphia outdoor writer, offers some surf casting tips to potential experts of tomorrow.





CONCERNING CERTAIN LURES

By CHARLES K. FOX

Most of the fishermen agree that bass and other game fish periodically alter their habits. At times they work in the shallows and at other times in deeper water. There are days or even hours when they manifest a preference for bait fish and periods when they turn to other aquatic or even land organisms.

There are intervals when they feed upon small morsals and intervals when they are in quest of substantial mouthsful. Then there are occasions in their lives when they pursue fast moving forage and other times when slow moving food is served to them on a silver platter. Sometimes during the open season they must exist in clear, low warm water and other times just the reverse. But feed they must even if it is spasmodically.

To a certain degree the same is true of other game fish, but such variation is not as marked in the case of members of the pike family as is the case with large and small-mouth bass.

These are the problems with which the plug fisherman is faced. His is a sport in which it is possible to alter or adjust the approach to cope with the existing condition.

We have plugs of different types, sizes, shapes and colors from which to choose. The percentage fishermen attempts to determine upon what the fish are feeding or at what level the fish are located and then fish accordingly. He is always in quest of the best bet.

Everyone who has spent time on a bass stream or pond has on occasion witnessed the minnow chasing activity. The bass can be seen pursuing the minnows and the minnows can be seen frantically attempting to evade gaping jaws. When this is going on we always bank on one of two lures, a scale finish midge-oreno or a casting spoon. The manufacturer of the midge offers a nice selection of finishes and our two pets are pike scale and shiner scale.

A great little casting spoon is the Johnson silver minnow and the gold finish of the same lure. If the natural minnows are of a silvery color, and most of them are where we have fished, we prefer the silver spoon, however there are waters teeming with golden shiners, sunfish, perch and even young leather back carp and this we believe is the right spot to turn to the gold spoon.

Lew Eppinger offers fine color range in casting spoons of different types, some of which fit nicely into this particular picture. Those with a single hook soldered right on the spoon have been much more effective hookers for us than the spoons with a loose double or tri hook. The answer to this one probably is that in the case of the loose hook the fish hit the spoon at times when the hooks have swung out of line. The single hook attached to the line is always right where it belongs.

The spoons are excellent for members of the pike family which are consistent feeders on smaller live fish. The very construction of their mouths attests to this.

On about 50% of the occasions that one of our minnow imitating lures has been promptly cast near fish charging minnows we have received strikes. On some of the occasions when we do not get a strike, it may be possible that the pursuer has eaught his prey and is too busy mouthing it to center his attention on anything else.

At times, and especially in certain waters, bass feed on crayfish, crabs to most of us. We have never successfully used an imitation crab, however there is a lure upon which we have settled for such occasion. It is Mack's minno-bug in the natural bucktail pattern and the darker bucktail pattern designated as Mack's favorite.

This particular lure is a weighted bucktail and spinner rig. The hair moves or "breathes" during the retrieve. Of course there is nothing about a crab that hold

any resemblance to a spinner, and our only excuse for the spinner is that it serves as an attractor. It undoubtedly makes the lure show up better, and it may attract bass from a greater distance. The bucktail itself is similar in size, shape and color to a crab. Incidentally the lure never served us well when the spinner was removed.

To try to take bass believed to be feeding on helgramites has presented a problem. In the first place there is no plugging lure available to our knowledge which has the appearance of this larva, and in the second place such a lure should be fished very deeply and slowly.

Following the same line of thought as expressed in connection with the rather odd imitation of the crab we use the black minnow-bug and think that we are catching bass which are nosing around the rocks for "creepers." The fact that best results have been attained when this dusky lure has been fished deeply and slowly particularly in cloudy water indicates that the assumption is sound.

It is our firm belief that when bass feed at dusk and at night they are not selective and they are out for anything they can get. It is at that time that they are presented their greatest opportunity to obtain larger morsels some of which are on the surface of the water.

We stick to surface plugs for night fishing not only because that seems to be the most effective level at which to fish but also because shallow water can be fished without snagging bottom. Crousing night feeders frequently enter the shallows.

There are a number of effective surface lures on the market from which to choose. We would not be without a small jitterbug, a baby popper, and the ³s oz. plunker. So many of the others are almost too large in size.

(Continued on Page 13)

PRESERVATION OF CAUGHT FISH

During the warm summer months, fishermen are confronted with the problem of preserving their catch in good condition until they reach home or arrive at a place where refrigeration is available. By following a few simple rules, fish can be kept in good condition without ice for a period of approximately ten days.

Tips on Keeping Fish Alive

Care should be taken that the fish are not injured when removing the hook. Hold the mouth open by grasping the lower jaw with the thumb and forefinger. Take hold of the hook with the other hand stretching the hole slightly, if necessary, to remove the barb. If the hook can not be removed readily or is embedded in the throat, its release may be facilitated by the use of a small stick with a notch cut in one end. Fishermen's knives have a special blade, known as a disgorger, designed for dislodging the hook and shielding its barb during withdrawal. When returning undersized fish to the water, always handle them with wet hands.

Some fishermen use a stringer for holding live fish. Others prefer a net with a drawstring or a loosely woven sack. Some fishing boats have a compartment supplied with fresh water for holding fish. The wire-hook stringer with a separate hook for each fish has proven very practical. The wire hook is run through the thin membrane back of the bony part of the lower jaw and through the upper lip. This permits the fish to close and open its mouth which is necessary for normal breathing. The stringer should never be run through the gills as this makes it more difficult for the fish to breathe and may cause death by suffocation; or the tender blood vessels of the gills may be injured, causing death by bleeding. Properly built boat compartments generally keep fish in good condition if not crowded. It usually is necessary to move the boat frequently to keep fresh water in the compartment. When a net or loosely woven sack is used the fish are placed in the container which is carried in the water alongside the boat. Fish properly strung or in a net or sack may be towed behind a slow moving boat. If the boat

must travel fast the fish should be taken from the water. If fish have been injured or cannot be kept alive they should be killed immediately with a sharp blow on the head.

Temporary Preservation of Fish

Fish should be bled as soon as killed. This is accomplished by removing the gills. It is desirable to dress the fish immediately thereafter. With trout and small panfish, the body cavity should be split down the belly to the vent for removal of the viscera. Fish with thick bodies and the larger species, such as bass and pike, may be opened by cutting along the backbone and through the ribs into the body cavity. This will reduce the thickness of the flesh and permit better penetration of the salt. The entrails and gills are removed and the body cavity scraped clean of all traces of blood and internal organs. Do not wash the fish unless pure spring, well, or tap water is available. Lake and stream waters often contain large numbers of bacteria. Washing in such water may cause spoilage more quickly than if the fish were not dressed. After the fish is dressed, salt is rubbed into the flesh and dusted over the skin side in the proportion of one tablespoonful to three-fourths pound of fish. The fish are wrapped individually in fresh clean leaves or in several thicknesses of paper and stored in the coolest place available. A moisture proof container will keep them from coming in contact with soil or water containing harmful bacteria. If a cool spring box or well house is not available, the fish may be buried loosely in cool earth. Another method of keeping fish cool, is to place them in a basket or box covered with several thicknesses of burlap or other absorbent material. This covering is kept moist and the temperature is reduced by the cooling effect of evaporation. Fish salted and stored by this method will keep for about 24 hours. If they have been properly dressed they are ready for cooking when thoroughly rinsed.

If fish are to be kept longer than 24 hours, they should be dressed so that no piece is more than an inch in thickness. Each piece should be rolled in salt and packed with as much salt as will cling to it.

The fish are wrapped and stored the same as in the 24-hour method except that not more than a pound of meat should be wrapped in a single package. The important point in preserving fish for more than 24 hours is to wrap them in plenty of salt. Fish preserved in this way should keep about ten days. They must be freshened for about four hours in two or more changes of fresh water before they are ready for cooking.—Prepared in the Division of Fish Culture of the Fish and Wildlife Service.

FIELD & STREAM

By R. E. ANGST

If we got no other compensation for writing this column we would be amply paid by the soldier mail we have received. Illustrating what we mean, here's a very interesting V-mail letter from a man many of you know personally. It comes from Somewhere in Italy.

Dear Mr. Angst:

If you are worried as to whether or not the boys over here will lose their yen for fishing, you might be interested to know that the Red Cross at seaport towns operates fishing craft almost every day. I have tried to go at three different ports and each time I was told the boats were booked solid, every seat occupied, for at least a month in advance. Many may be elsewhere when their reservations are available but others are always ready to lift them. It shows that, regardless of war, the boys still love fishing even if it is deep sea, even as you and I.

Give my regards to the Schuylkill and Carbon Co. sportsmen.

Howard Hobbs.

The following letter, received last week, is from a boy still on this side, and one not personally known to us. His letter contains an interesting message to all sportsmen still at home.

Quoting in part: "If, when this war is over and we want to come back to some good fishing, as fellow sportsmen we must all stick together to see that the things we want will take place."

The writer further advocates that stocking for after war fishing be started soon. He states that it is up to the sportsmen remaining at home to look after the interests of those who are away. "Things will be blasted wide open when we get back if the promises made to us are not carried out."

"And try to get Tunnel Dam made into a good bass pond," says Jack Harner of Schuylkill Haven, writer of the above message.—Pottsville Journal.

At the last meeting of the Board the following nursery waters were opened to the public for fishing:

Elk County—Tributaries to Bear Creek and Big Mill Creek.

Luzerne County—Alderson Section of Harveys Lake.

Buffalo Creek, in Washington County, was closed to all fishing for a period of five years from December 1st to July 1st. This means that the stream will only be open for fishing from the first day of July to the last day of November, both dates inclusive.

Fishermen will be interested in the following rules and regulations which the Board has set up on what is known as Reining Pond, located in Cherry Ridge Township, Wayne County, which is now owned by the Board.

For the present it was decided that fishermen holding the proper license, etc., should be permitted to put rowboats and canoes on the pond during the open season, July 1st to November 30th.

The rules and regulations which have been posted are as follows:

Regular season and bag limits.

Power boats prohibited.

Rowboats and canoes permitted on pond during open season at owner's risk. No fires to be built along the shore line.

No camping will be permitted on the property.

The cutting of any trees, shrubbery or in any way interfering with or destroying any property is strictly forbidden.

Paper, remnants of food, or trash of any kind must not be thrown about the shore line.

It is also suggested that fishermen protect this property so that this privilege can be continued. Also, should they observe violation of the fish laws, to make immediate report to the nearest officer or to the Board of Fish Commissioners, Harrisburg, Penna. By observing all the laws governing fishing and cooperating with the Board of Fish Commissioners they are assisting in the creation of more and better fishing.

CONCERNING CERTAIN LURES

(Continued from Page 11)

Many times when we commence our fishing and even during the course of it we are given no clue whatsoever as to the feeding activity of bass. Our pet lure under such a circumstance is the midget spinner, commonly known as the pumpkinseed. Here is a lure with which we can obtain good range and with which we can fish varying depths.

By controlling the speed of the retrieve and by using the direction of the current when stream fishing this little lure can be fished at almost any depth. Among the fishermen of our acquaintance it is far and away the most popular. When dressed in its green perch finish it is a mighty fishy looking lure and the silver flitter finish is a bright attractor.

It is probably the best bet of all in very cloudy or muddy water because the propellers fore and aft give it sparkle and noise, however the black minno-bug should not be sold short under such a circumstance.

When the shallow creeks are low and clear we depend heavily upon the baby popper fished slowly and rather gently. It is at its best in such an environment and although it is about the toughest of all lures to handle it produces spectacular strikes and plenty of fish under "tough" conditions. The fact that we see and hear the strike on this tiny surface bait makes this specialized fishing more appealing. The inveterate dry fly trout fisherman really goes for it when he turns upon bass with his plugging outfit.

Color in a surface bait is not as important as color in an underwater, because fish cannot observe it as clearly. The finish of the baby popper shrinks into insignificance when compared to action given it. The best poppers to handle are those with the hooks and screw eyes centered and in line.

Hot weather bass fishing in deeper waters presents still another problem. We can take for granted that when the water is hot the bass collect by day in the deeper rocky pockets. If the holes and pockets are more than 4 feet in depth the baby popper loses its effectiveness and bass will rarily be brought to the surface during the brightness of day. This is not true, however, of the smaller streams with more shallow pockets.

In the deeper water it is advisable to work the lure right among the fish. Our favorite for such a situation is the midget river runt in a scale finish or the white shore minnow depending upon the clarity of the water. The duller of the two is fished in clear water and the brighter finish in cloudy water. The midget digit is a substitute for the midget river runt. This seems to be the most effective manner of meeting this undesirable yet common situation.

The one lure fisherman has his innings and he can present strong arguments and enjoy good catches to back up his policy, but the percentage fisherman is the fellow who "gets them when nobody else can" and he hangs them too when the other fellow comes through. Versatility in this sport is an advantage just as it is in all the other sports; yes a very definite advantage.

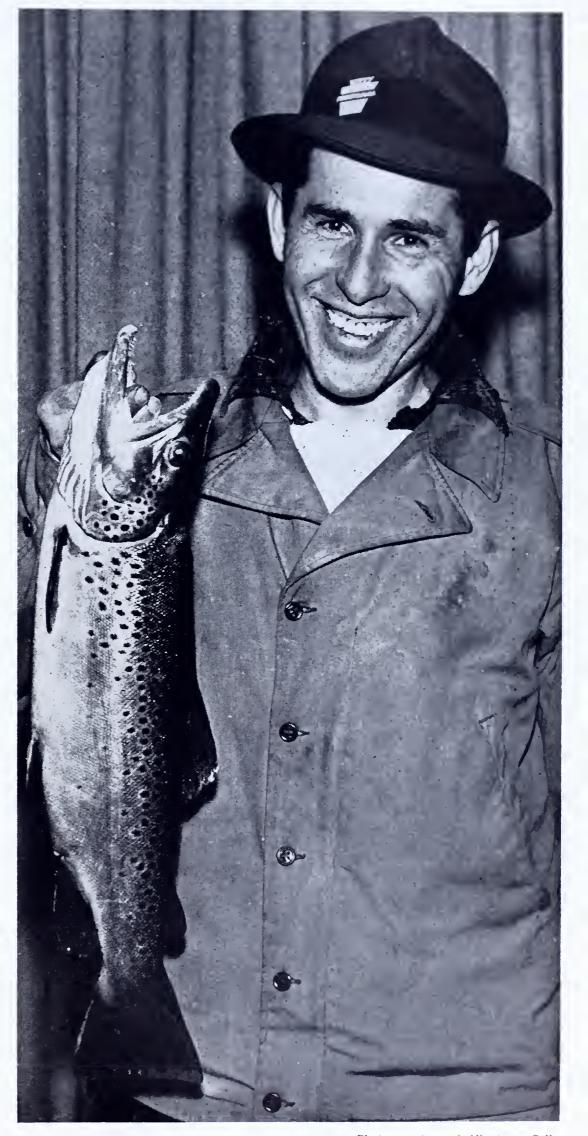


Photo courtesy of Allentown Call.

Another big brown trout from the Little Lehigh. This great fish was caught by Maurice

Thomas of Allentown.

BUY BONDS

ROD AND GUN CHATTER

By THE OLDTIMER

British Scientists Grow Fish in Scottish Loch

We are indebted to Dean A. R. Warnock of State College for the interesting articles taken from the Transatlantic edition of the London Daily Mail:

"Science has made the angler's tale come true. Those little tiddlers that grew to whales over a glass or two of Scotch are actually being enlarged by scientific feeding in an Argyllshire, Scotland, loch (lake).

"When, 18 months ago, the U-boat war threatened a fish famine in Britain, Imperial Chemical Industries put two leading sea scientists—Sir John Graham Kerr and Professor Gross—on to a 'fish farm' experiment at Loch Sween.

"They set about fertilizing the loch with nitrates and phosphates. The small fish fed on them and were in turn eaten by table fish which in a month or two grew bigger than they would after three years of natural feeding.

"The result is that today flounders, plaice. sole, and other flat fish weighing 20 times their normal poundage are swimming obligingly into nets cast all over the loch.

Parliament Interested

"Parliament is to hear about this fish farm soon.

"The Secretary for Scotland is to be asked whether he has considered the report on the



This happy angler landed his. A 16 inch rainbow fell to the prowess of 12 year old Rellor Kolb of Green Lane at the Park dam.

experiments, 'which have been successful in increasing at a phenomenally rapid rate the size of plaice and other flat fish,' and whether he intends to have the experiments followed up by others in view of the importance of the subject.

"Marine farming may mean that fishermen after the war will 'grow' fish where they want them instead of going to sea to look for them.

"An expert at the Scottish Marine Biological Station at Millport said: 'Fish population is, of course, governed by the amount of available food, which is generally greater out at sea.

"'This Scottish experiment of bringing food to the fish will mean that we can plant the lochs—sea-lochs particularly—with any desired type of fish.'

Good Fertilizer

"The experiment so far has been confined to Loch Craiglin, an inland arm of Loch Sween.

"Here an area equivalent to 20 land-acres has been dammed off to prevent either fish or phosphate from escaping to the open sea, and scientists have fertilized the water chemically in exactly the same way as progressive farmers treat land.

"Nitrates increase the minute plants which feed the tiny bait fish and are passed on to the edible variety to produce plumperthan-ever flounders, haddock, and sole.

"One visitor to Loch Sween claimed to have seen fish which grew more than 20 times more rapidly than normal."

Must Increase Food

We have copied the above article in its entirety because we believe that our readers are interested in this very practical experiment on the part of our British allies. Our own government is carrying on experiments to increase the yield of fish ponds by proper fertilizing.

We pointed out a week or so ago that game fishing in this section of Pennsylvania is getting progressively poorer year by year. More stocking of streams is evidently not the answer. The real problem confronting our conservation bodies is how to increase the amount of food for the fish already in the water and for those that are to be planted, and to have that food fed not to worthless, inedible fish but to fish valuable for the table.

It has been proved over and over again that fish growth is directly dependent upon the food supply. In hatcheries where fish are fed all they can eat of the proper food, they grow phenomenally; but in small feeder streams like many of our mountain brooks where food is limited the growth is almost nil.

It seems to us that the hope for better fishing in the future lies not in an increased stocking of the streams with small fish but in increasing the food supply in the water.

—State College Center Times.

A WILD DUCK STORY

A wild mallard duck selected a spot at the base of a tree, about six feet above the water level, on the east side of the state highway bridge in the borough of Schwenksville, adjacent to Kratz's mill; and in full view of pedestrians who could see from the side of the bridge, the nest, which was about fifteen feet below the railing.

One day early in April of this year, the duck started laying, and for twelve consecutive days an egg was added to her nest, after which she started to set on them.

All went well for several weeks, with one or more drakes keeping guard over her by swimming about the nearby waters, and with Junior member Bob Markley and prospective junior members Raymond Kratz, Freddie Kehs, Jane Bechtel, Calvin Trovinger and others living nearby, watching that nothing would disturb the duck or the eggs. Suddenly, late in April rain started to fall for several days, swelling the waters of the Mine Run and the Perkiomen Creek so much, that by the evening of the second day the creek waters reached the nest, inundating it with two or more feet of cold water until the next morning, and during all this time the duck did not forsake her nest, but kept swimming around and around attempting to protect several of the eggs that were floating above and about the nest area.

Early the next morning we hastened to the bridge to see what had happened after the waters receded, and true to her trust, Mrs. Duck was on her nest. Two eggs were about three feet below the nest on the bank and from the marks in the mud and on the eggs, the duck must have struggled to roll them back into the nest but could not, due to the steep incline of the bank. We assisted her by placing these two eggs at the side of her nest, and in so doing, nine eggs were counted in the nest when the duck stood up as we approached her, placing a total loss of only one egg due to the flood waters. Before we were out of sight, the duck had rolled the two eggs, (which we placed at the side of the nest), under her.

About ten days after the flood, to our surprise, broken egg shells were noticed at the edge of her nest, and after some few minutes of patient waiting and watching, two little greenish-yellow colored ducklings appeared from under the mother's wings. Later in the day, more broken egg shells were noticed and by the morning of the next day, Mrs. Duck and her family had quickly and quietly vanished, leaving nothing but empty egg shells, which are noticeable at the present time.

Although there have been no reports of anyone having seen this family since leaving the nest, the boys and girls who kept watch from time to time make varying claims of from five to nine ducklings being hatched from this flood-covered nest!

Reprinted from "The Sportcaster" Monthly publication of The Perkiomen Valley Sportsmen's Association.

Sgt.: "How is it you don't like the girls?"

Pvt.: "They're too biased."

Sgt.: Biased? What do you mean?"

Pvt.: "It's bias this and bias that, until I'm broke!"

THAT FIFTH ACE

(Continued from Page 5)

shall rise that long black rifle will speak, the gleaming black handled knife flash in the moonlight, and there'll be one less red demon to bash the year old babe against the sycamore butt, to strip and rape the screaming white mother, to roast the agonized father at the steaming stake.

The Black Rifleman! Legendary champion of a bygone, pre-Revolution age! Known then as the watchdog of all Penn's Woods; all but forgotten now! History never gave him his rightful due! Identified as Peter Joel by the French, where, whence, what was his fate? Maybe that strange wild recluse, dying in the Wilderness of the Juniata and buried in 1772 at the foot of the lonely mountain bearing the Hunter's name? . . . was he actually the one-time stealthy forest destroyer as he claimed to be? Or was his merely a tired, weary, hungry old mind just re-living the campfire sagas and the trading post whispers of the long ago, and as oldsters sometimes do, attaching a personal significance thereto?

The Black Hunter, never a murderer, always an avenger; definitely native of these very bottoms . . . unknown, enigmatic, even to those he warned and succored! Perhaps most likely his scattered bones smoulder in some pitiful element ravaged cleft along the tumbling Juniata or the sweeping Susquehanna, unknown, lonely and alone as in very life itself, there sleeping the ageless twilight of eternity. The gurgling wavelets seem to know and try to tell; the vagrant autumnal zephyrs whisper teasingly too, but mere earthly man can not connive with such of these and history guards her secrets well.

One thing though we know, and the frequent lonely fisherman will attest thereto . . . standing quietly at some beauty spot, and always in the peace of autumn, he'll feel sharp questing eyes boring into his very soul. Glancing about quickly, on the opposite shore half hidden in the rustling foliage will stand a lean, stalwart, hardbitten figure, dressed in deerskins of midnight black, head to moccasin; face too, blacked to a sooty charcoal ink; blackened powder horn at the waist, black sheathed and handled the giant hunting knife slung opposite . . . cocked in the left arm the inevitable frontier rifle, it too, long, lean and black, an inky ham size right hand cupping the trigger guard and the powder pan!

Wraith-like, as the chilled modern quickly brushes his brow to peer again, the apparition holds up a hand, palm outward in the ageless sign of fellowship, then turns away to melt and fade into a prosaic tree trunk, an odd shaped rock, or a shimmering bramble bush. But It was there! Or wasn't It? The angler saw It! Or didn't he? He'll swear he did; still he knows such couldn't be! But yet . . . I think he did! I think I've seen It too, now one place, now another; anywhere from the gory Girty marshes near unto Duncannon to the old fort above Lewistown, the bloody tortured trail of the long ago. And then too the lonely wayfarer of the storm tossed night! . . . at times above the moan of the gale astride the crags and the pinetops there reechoes the piercing wierd wail of friendly warning, the sharp crack of the long rifle,

the furtive rustle of the red terror fleeing the roadside ambush. Yes, in autumn the Spirit of the Black Hunter still patrols the lush meadows and the wooded crags he loved so well and protected so fiercely. Always in autumn! Watching; guarding; shepherding the westerly tide of America. And somewhere lurking nearby too, I suspect may be Washington of Necessity and Wayne of Fallen Timbers; Col. William Crawford and the Wetzels; Old John Harris and Braddock likewise; maybe even that ancient ancestor of ye scribe, he who wore the kilts and hearkened unto the pipes of a proud, swaggering French and Indian War Highland regiment.

Yes, it's a witching hour, autumn, when all mankind seems mellow, when sadness and peace and hope all join into a mood indescribable, when big bass become really big, fat and portly, and when far wiser than mere humanity, having answered nature's summons to depart the now weedless summer shallows, the finny monarchs seek the safety of the deeper pockets with the stored up lunkiness to sustain life o'er the dormant winter period; likewise the wall-eye, reddened gums long since pale and firm, also feeding voraciously, storing up energy, resistence, fuel against the trying ice capped months to come.

Awed, the angler stands quietly, reverently, drinking in the beauty, the glory, the mysticism of the Edenlike Paradise. Then awakening with a short sobbing intake of breath, the wanderer ties a Midget River Runt to the 12 or 15 foot nylon leader—the rod tip arcs sharply back and immediately zings forward twice as powerfully-and far out along the outcroppings the tiny lure drops lightly astride the eddy. Slowly . . . easily . . . hardly moving at all . . . with plenty of time . . . like a sixteen year old moonstruck filly trapsies homeward with her first beau . . . the retrieve! Abruptly and suddenly the rod tip leaps upward and back, the bamboo crescenting into a wracking bow, and the line stretches far out across the channel, taut and stiffly! Momentarily, nothing happens! Snagged? Is he fast? Immediately, as if in answer, there's a mad swirl, spouting spray, an agitated whirlpool and the throbbing string begins to cut hither and yon, now up, next down, then away . . . and around and around, back and forth, around and around in slashing arcs, but ever nearer unto the fisherman.

It's a battle of give and take! Patiently, cooly, skillfully the angler leads his adversary around, the bull like rushes weaken and become perceptibly shorter. Now the fisherman begins to recover line steadily, always taking, seldom giving as at first. And soon a giant form breaks surface right beneath the rod tip and flaps wearily over to it's side, too big for the landing net. Warily, carefully, the angler reaches down to seize the big fellow. Maybe a five pound smallmouth; maybe a six, or seven or eight pound wall-eye. Either a worthy trophy . . . either the game of September, of October, of November and the Midget River Runt!

Yes, the Midget River Runt is my late season Ace!!!!

BUY BONDS

Selecting and Balancing Bass Fly Rods

15

(Continued from Page 6)

though there are some good arguments for using a 9½ foot rod.

10. Patronize a reliable dealer and be guided by his advice in the matter.

Balancing the rod is very important. Too light a line will not bring out the full power of the rod and too heavy a line will strain the rod. With a level enamel line, a size C or D should be used for rods weighing 6 ounces and over, and a size D or E for rods weighing around 53/4 ounces. Tapered and torpedo head lines are worth careful consideration for casting dry flies and bass bugs, but a level line works well with most lures and is less expensive. Too light a reel will make a rod top heavy and too heavy a reel will have a tendency to pull the rod upwards, requiring more force to make the forward cast. After the reel is attached to the rod and the line is threaded through the guides, coil about 30 or 40 feet of line and suspend it at the tip end. This should bring the balance of the outfit about 6 or 8 inches above the grip according to the length of the rod. If the balance is too far from the grip, weight the reel or purchase a heavier one. If the balance is too near the grip, use a lighter reel. The line must be of the proper size to fit the action of the rod and the reel must have the right weight to balance the outfit. Many manufacturers prescribe lines to fit their rods so that it is largely a matter of balancing the outfit with a reel.

MID-AUGUST PLUGGING

(Continued from Page 7)

just to take advantage of this fact. I might mention here that the Midget Spinner will frequently work the same way.

This story might well end right here except for a friendly family feud. My father, whose 74 years have taught him a wealth of bass lore, is firmly convinced that the Midge-Oreno is enough bass plug for anybody. Hc allowed as how he could go over the same water with his 968SF and catch bigger fish than any other plug ever thought of catching. He further insinuated that the fifty or so fish Crawford and I had returned unharmed (we had kept only two during the four days) were but minnows anyhow and now that we had scared off the little ones he could get the lunkers. Just to prove it, on his next two trips he caught three bass 18, 19 and twenty and a half inches. Feud is over. Son now plays second fiddle to dad.

COMPETITION

A father and son combine has been putting on a fishing contest of its own up in northern Pennsylvania, the entrants being Frank J. Thomas and his son, Dick, of Sterling, which is near the widely-known Lake Wallenpaupack. The father made an opening move when he caught a rainbow trout there that was a little more than 26 inches in length, weighed eight pounds and had a girth of more than 15 inches.

Then Dick, who is 11 years of age, caught a rainbow trout in the Paupack River that was 251/2 inches long, weighed five and threequarters pounds and had a girth of 14 inches. "I'll beat you yet, Dad," the younger Thomas is quoted as saying.

SPORTSMEN'S HERITAGE

(Continued from Page 10)

At every sportsmen's gathering one of the topics usually discussed is their "rightful heritage" to hunt and fish, but there are just as many different ideas as to what this heritage is as there are hunters and fishermen. It seems that each has his own individual opinion as to his rights in the outdoors.

The phrase most generally used in this connection is the one about "the traditional right to hunt and fish handed down by our forefathers." No matter how much we stretch our imagination it would be difficult to consider hunting and fishing privileges as a heritage, unless our forefathers happened to pass down to us sufficient lands and waters on which to do this hunting and fishing, and this, unfortunately, very few of them did.

There is no doubt, however, that many of us did inherit an innate desire to hunt and fish from our ancestors, who bagged game and caught fish to provide food for their families. Now we hunt and fish not of necessity, but because of the pleasure enjoyed and the personal gratification obtained if we are able to take game or land fish. Hunting and fishing are rightly classified as outdoor sports that furnish recreation, exercise and varying degrees of pleasure to the participants.

They are not rights but privileges, and unless we are on our own lands or those belonging to the State or Federal Government we are enjoying ourselves merely because of the tolerance of kindly disposed landowners who permit us to roam about their property. As a matter of fact, we are their guests. Hunting and fishing licenses do not give us the right to trespass on any privately owned land—they merely permit us to take birds, game and fish during the open seasons in accordance with the State laws.

Because of this scarcity of open hunting and fishing lands, especially near densely populated sections, sportsmen's groups, in their anxiety to provide more places, have been working on the wrong principle. Many of them are of the opinion that they can force landowners to reopen their lands to the public. There have been thousands of resolutions passed by various sportsmen's clubs suggesting ways and means to curb landowners and private hunting and fishing clubs, few of which were either sensible or constitutional. They were so engrossed in their efforts to infringe on the rights of others that they failed to realize that they had their own rights, which could be protected.

Their real heritage, handed down, not by their forefathers, but through the ages, is the air, the birds in it; the waters, the fish in them and all wild game, for them to enjoy during their lifetime and then pass along to posterity.

All these, by their very nature, are incapable of absolute ownership. In this country they belong to the state for the benefit of all the people. They are not the subject of private ownership except in so far as the people may care to make them so by legislative enactment, which also includes game in preserves and fish in natural waters.

This means that while birds, game and fish belong to the people, the state legislatures can protect them for the best interests of all, and they do not become our individual or personal property until we bag or catch them legally. When a hunter inflicts a mortal wound, killing birds or game, or a fisherman brings fish to his creel, he is then the owner, and they belong to him the same as any of his other possessions.

While it is irrefutable that the: air, birds, waters, fish and game belong to all, it is also true that they are inaccessible to most people. It is for the various legislatures to determine how best to afford this means of access, and it is up to the sportsmen to prevail on their legislators to take care of them and their heritage.

"Curbstone decisions" handed down by various jurists from time to time are unanimous in the opinion that these are incontrovertible facts, and most important, absolutely constitutional.

Property owners have their rights which must be respected, but the sportsmen also have theirs, and it's up to them to see that measures are taken to protect them so that all may have the privilege of hunting or fishing individually, for what belongs to them collectively.

The status of land owners and tenants has been clearly defined. It has also been ruled that a stockholder or member of a fishing or hunting club is not an owner of land in the meaning of the provisions of law pertaining to owners of lands, and further that the title to ownership to wild game and fish is in the State, irrespective of the ownership of the land on, or the water in which they may be.

There is no sound reason why individuals or groups should be able to hunt on closed lands, or why any waters in a state should be fished by only a few. There is no doubt that some people have been commercializing something (fish and game) which does not belong to them, but to the people.

Where these conditions prevail, the sportsmen can have this nationwide exploitation of "their heritage" stopped if they will cooperate and bring pressure to bear on the right people, and proceed on the basis that the air, waters, birds, fish and game belong to the various states, and that no one has the right to permit paying guests to hunt or fish and deny that privilege to all other part-owners of this fish and game.

Our boys are now overseas fighting for the right to live in a free country, where they can enjoy the great outdoors in the truly American Way—by hunting and fishing. But it is up to the sportsmen on the home front to protect their interests while the boys are away or when they do return there will be no place for them to hunt but barren, desolate wastelands, or no place for them to fish but filthy, polluted waters.

Abraham Lincoln said: "I do the very best I know how. The very best I can; and I mean to keep right on doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, ten angels swearing I was right would make no difference.

IT'S ALL TRUE—SO HELP ME

(Continued from Page 9)

spot where the line entered the water. I started to pull gently and firmly, thinking that I might loosen it from whatever object I had fouled. At first it held, then I felt it give slightly and started to take a few steps backward when—

Zi-i-i-i-i-i-i-i-ing! Something started ripping the line off my reel like nobody's business. By the time I was able to get my rod up into position and my reel under control, about fifty feet of line had been taken out.

Then I forgot everything but the fish. It didn't fight very hard, but it made several short runs, and it certainly did pull. Finally I got it right up to the edge of the mud bank and with the aid of a short gaff, dragged it up on the flat. A channel bass that weighed thirty pounds if it weighed an ounce.

As I leaned over to examine the bass, it suddenly dawned on me that I hadn't used any bait. And the most extraordinary part of it all was; the fish was hooked through the lower lip with the hook in reverse position. The point had entered from the outside underneath and come up inside his mouth right through the thick portion of the lip. Just as if the bass had held still while some unseen hand had carefully placed the hook.

"Hearing a step behind me, I turned around to see Earl Fletcher standing there. "Well Bert," he said. "That's a nice one for a starter. What kind of bait did you use?"

"Bait! Huh! Who needs bait?" I replied. "There's your box of crabs laying over there, just the way you wrapped 'em this morning. I just use a hook."

At the conclusion of the narrative of the "Charmed Hook"; Doc, who had been quiet all evening, snubbed out his last Ramasees and arose to his feet. "Well boys, I see a lotta empties. Guess it's time to mix a few. Wottle it be?"

Everybody agreed to another Old Fashion, and while Doc busied himself with the infredients, the boys started a little discussion as to who had told the best story. It was a tough choice, for they were all good, and the argument was getting nowhere fast when Doc, who was still doing a juggling act with a lotta bottles, turned to the group and said:

"Fellows! Do you know what I think?"
"What?" Everybody asked at once.

"Well, I think that if Jonah had 'ave swallowed that whale instead of visa versa . . . that would have been the greatest fish story ever told."

And so it would.

That spluttering splash that a surface plug or bassbug makes when it alights on the water is important, for it attracts the attention of fish that are cruising in the vicinity. The fish will look over the lure from a distance, then usually approach to investigate. That's the reason for the strategy of letting the lure lie motionless for a brief time before the retrieve is begun.



What is more fun than fishing?

Perkiomen Valley Sportsmen's Association Sponsor Big Fish Contest

Rules

1—The contest is open to all Junior and Senior members having dues paid up at time of catch. The purpose being to have members become better acquainted with methods and ways of catching fish for sport and pleasure, and to encourage sportsmanship in fishing.

2—The contest will open April 15 and close Nov. 30.

3—All fish entered must be taken with rod, reel and line in waters of Pennsylvania.

4—The monthly meeting night shall be the deadline for entering any fish caught prior to that date. All entries to be turned in to the Secretary or members of the Fish Committee, with names of two witnesses.

5—The entries receiving the highest total number of points including all species will be eligible for first prize.

6—Every fish entered above the following minimum length will receive the number of points shown in graduated scale opposite that length.

LENGTH IN INCHES

BROOK TROUT	RAINBOW TROUT,— CATFISH	BROWN TROUT,— BASS Large Mouth Small Mouth	PICKEREL,— WALLEYE PIKE	CARP	EELS
9 — 2 pts. 10 — 3 pts. 11 — 5 pts. 12 — 8 pts. 13 — 12 pts. 14 — 18 pts. 15 — 24 pts.	12 — 1 pt. 13 — 2 pts. 14 — 3 pts. 15 — 5 pts. 16 — 8 pts. 17 — 12 pts. 18 — 18 pts. 19 — 24 pts. 20 — 32 pts.	15 — 2 pts. 16 — 3 pts. 17 — 5 pts. 18 — 8 pts.	18 — 1 pt. 19 — 2 pts. 20 — 3 pts. 21 — 5 pts. 22 — 8 pts. 23 — 12 pts. 24 — 18 pts. 25 — 24 pts. 26 — 32 pts. 27 — 44 pts. 28 — 60 pts. 29 — 80 pts. 30 —100 pts.	20 — 1 pt. 21 — 2 pts. 22 — 3 pts. 23 — 5 pts. 24 — 8 pts. 25 — 12 pts. 26 — 18 pts. 27 — 24 pts. 28 — 30 pts. 29 — 36 pts. 30 — 42 pts. 31 — 48 pts. 32 — 54 pts. 33 — 60 pts. 34 — 66 pts. 35 — 72 pts. 36 — 78 pts.	26 — 3 pts. 27 — 4 pts. 28 — 5 pts. 29 — 6 pts. 30 — 8 pts. 31 — 10 pts. 32 — 12 pts. 33 — 14 pts. 34 — 16 pts. 35 — 20 pts. 36 — 25 pts. 37 — 30 pts. 38 — 35 pts. 39 — 45 pts.

A first prize will be given to the Junior member earning the largest number of points on the same basis as the regular contest

NOW I'LL TELL ONE

That's the opening sentence of a letter received from a Pacific Coast fisherman by the Gray Marine Motor Co.,—and here is his story.

"Pilchards—sardines to you—are a tempermental fish and their schooling habits are unpredictable.

"Since every mile and every minute counts in these days of man power shortage and scarcity of fishing boats, we fishermen, now members of the Coast Guard, saw in the Navy Patrol Blimp a real service over and above our call to duty. We instructed the crew members how to recognize schools of sardines from the air. This could be done along with our regular duties."

"On the day the first school was sighted the size and direction of the school was radioed to port, I pushed the button on my Gray Diesel and was one of the first to arrive on the scene. 1000 tons of fish were taken that evening and before the week was over 6000 tons had been caught.

"Some of the largest schools are sighted during the dark of the moon. There are minute organisms on the surface of the water, the school of pilchards disturb these and cause them to phosphoresce and this in turn reveals the location of the school."

All this to the coastal fishermen is as exciting to relate as any tale from the piscatorial repertories of the inland water sportsman.

Pike Fry by Millions Go Into County Fish Waters

By KEN WILLIAMS

The management of the Pymatuning Lake Fish Hatchery has proved it knows how to deal in big figures—as is the common trend these days—by releasing more than two million wall-eyed pike fry in Crawford County fishing waters.

The tiny pike minnows, hatched from this spring's netting of big breeder wall-eyes from the upper-lake "fish farm," have been dumped into the main Pymatuning Lake, Conneaut Lake, Canadohta Lake, French Creek and Oil Creek—and two tank-truck loads of adult pike were stocked in Conneaut Lake. The distribution was as follows, according to an announcement made by County Fish Warden Carlyle Sheldon of Conneaut-ville:

"More than a million" in Pymatuning Lake; 400,000 in Conneaut Lake; 400,000 in French Creek; 250,000 in Canadohta Lake; 100,000 in Oil Creek.

The obvious remark at this stage is "that's a lot of fish fry." But we'll refrain, merely observing that this stocking program surely should be all the evidence required to prove that the "fish farm" is a going concern, and that there is no lack of attention these days on the future fishing prospects of this county's best-known fishing waters.

-Meadville Republican.

EXCERPT FROM THE LETTER OF A SOLDIER

"We are camped out for a week, living out of sleeping bags, doing our own cooking. Mountain rations—ten pound box feeds two for four days. Everything from good onion soup to fruit bars—real tasty and darned nourishing.

"At present we are under a group of crack former Forest Rangers, learning about the woods. I enjoy the work, and should know something when we finish. It's beautiful up here, but climbing at 14,000 to 17,000 feet each day is tough work. They climb us till our throats are truly parched; we gasp for air at this altitude, can't breathe through your nose, you just gulp it in. Our shoulders are cut by a 30-pound rucksack and the sun really burns up here. Say, if anyone should ask you, mosquitoes do live (and bite) at 14,000 feet. I'm full of bumps.

"Today we climbed one mountain that afforded us a view for one hundred miles in any direction. During our lunch 'break' we had a snowball fight, honest to goodness snow. We slid down on a covered snow spot, off a cornice, for a slide of about 300 feet. It was grand. All I got was a wet seat.

Now we are back at bivouac, tired, aching, but hell we will be up at 5:30 A.M. tomorrow and hit that chow like an ole salmon. As I write this, a little brook babbles three feet away, before me is a bed of boughs to sleep on, my stomach is full, and ten feet away is a mountain tent that will shelter me from the rain which is imminent.

"I have my tackle with me, but I don't think I'll get much chance to use it. Only little spring brooks and no trout. About eight miles from here are a lot of beaver pools that I might try later. Expect to get into Glenwood Springs this week-end and fish the Colorado.

"Went fishing two hours Sunday and caught about a dozen, up to 10 inches. Saw one about 15 inches, a good pound and a half, but no soap. Flies, streamers and Colorado spinner. Beggar was under a log, but I'll catch him feeding, one of these days. Water getting kind of low now in the beaver pools, fishing getting a little tougher, but that makes it all the more fun. Just so long as I can get my feet wet in a stream, and cast around, forgetting everything, I'm happy! Of course a fish or two is nice, but not important."

With a sigh for my lost youth, and hoping you are the same,

PFC. RAY W. DIERKS.

A young couple, very much in love but rather temperamental, worked in the same tool plant. One day the fellow got caught in one of those revolving machines and whirled thru the air as it went around. His girl rushed over, switched the thing off and grabbed him in her arms as he fell to the floor.

"Oh, George," she begged, "speak to me!"
The fellow looked up groggily, "Why should I?" he asked. "I passed you six times and you never spoke to me."

The late Irving Cobb said: "If it ever becomes my misfortune to go insane, I want to go live in Washington where I will not be noticed."

Fishing Party Rescued After All-Night Stay on Flooded Bald Eagle Island in June Flood

Four persons who were standed overnight in waist-deep water on an island in Bald Eagle Creek below Mt. Eagle had to be rescued as heavy rains brought the stream level to its greatest height since the 1936 flood.

One of the men in the fishing party was nearly drowned late yesterday morning in an unsuccessful attempt to land a boat on the island. The stranded couples, Mr. and Mrs. Raymond Holt of Clearfield and Mr. and Mrs. Charles Walker, Woodland, were not removed from the island, known locally as Jackson's Island, until after 1 P.M.

The two men and their wives spent the long night on the island in water well above their knees with the swift muddy waters of the large creek on all sides of them. The women spent most of the night sitting on limbs of trees, Holt, the last to be removed to shore, reported.

Although exposed to rains and later flood waters from early Saturday evening until yesterday afternoon the condition of the four persons was not regarded as serious. Walker, who swam to shore in the morning and who was nearly drowned when he attempted to land a boat suffered from shock. The rescue party that was formed by residents of Mt. Eagle and Howard had a Howard physician on shore when the rescue was made.

Active in the rescue work was Wilbur Brumbaugh of Howard whose boat took the men and women to the shore. Others who helped with the boat were Raymond Gates and John McCartney of Mt. Eagle.

The four anglers walked to the island Saturday through a dry channel which later became filled with water. They pitched a tent intending to spend the night safely "in the warm and dry." After it became dark they discovered that the land on which they were camping was completely surrounded with swift water.

Swimming ashore yesterday morning with comparative ease Walker borrowed a boat from Richard Heverly of Mt. Eagle. In his attempt to return to the island the boat capsized earrying its passenger down the swollen creek for about a mile. Walker clung to the boat until he was near enough to the shore to land safely. The boat continued down stream.

The trio watching Walker's struggle from the island were certain that he would be drowned in the swift current. Walker would have probably been successful in landing the boat if he would have headed for the upper end of the island instead of trying to land on the side where the water moved more swiftly, residents of the neighborhood said.

Walker, who recently underwent an operation on one of his knees was able to walk only with difficulty, Holt related.

The island, which one of the men had visited on previous occasions, is located about 200 yards below the sand bank at Mt. Eagle.—State College Center Times.

REGULAR FISH WARDENS

Name	Address	Telephone
Redos, Michael J.	725 Penna. Ave., S. Renovo, Clinton Co.	
Ahrens, Julius	Star Route No. 3, Oil City, Venango Co.	2676-R
Bachman, Floyd	49 Broad St., Stroudsburg, Monroe Co.	449
Bailey, Ross C.	230 W. Main St., Youngsville, Warren Co.	2-2181
Banning, James H.	Connellsville, Fay Co., 1003 Grandview Ave.	946
Bidelspacher, C. A.	302 E. Third St., Williamsport, 18, Lyc. Co.	2-4561
Brink, Frank	Milford, Pike Co.	108
Chrisman, R. J.	Kushequa, McKean Co.	Mt. Jewett 4648
Cloos, Leland E.	Middlebury Center, Tioga Co.	25-R-11
Close, L. E.	R. F. D. No. 2, Emporium, Cameron Co.	6931
Cole, Harry Z.	877 Cherry St., Norristown, Montgomery Co.	2335
Dahlgren, David	Philipsburg, Centre Co.	317
Davis, Dean R.	922 W. Mahoning St., Punxsutawney, Jeff. Co.	1048-M
Greener, Robert M.	445 E. Strawberry St., Lancaster, Lanc. Co.	2-8603
Hahn, Edwin	138 Myrtle St., Erie, Erie Co.	C-58-115
Harter, Keith	Dalton, Lackawanna Co.	100
Henderson, S. F.	R.F.D. No. 2, Greensburg, Westmoreland Co.	2684
Hill, Rayel	Bowmanstown, Carbon Co.	Palmerton 4228
Iman, Clifton	Evans City, Butler Co.	3552
James, George H.	65 E. Louther St., Carlisle, Cumb. Co.	708
Johnson, J. Albert	12 Hobson Place, Bradford, McKean Co.	4362
Jones, Minter C.	238 W. Garrett St., Somerset, Somerset Co.	347
Lech, Anthony J.	420 Hess St., Schuylkill Haven, Schuyl. Co.	566
Lender, Lincoln	1014 Penna. Ave., Huntingdon	2981
Litwhiler, Charles	Numidia, Columbia Co.	2001
Long, C. V.	East Waterford, Juniata Co.	Blain 5-R-5
Neff, Harvey D.	436 S. 18th St., Allentown, Lehigh Co.	7063
Noll, G. Max	2 Church St., Montrose, Susquehanna Co.	149-M
Noll, Leroy	Pleasant Mount, Wayne Co.	Hatchery
Ogden, John S.	520 Girard Ave., York, York Co.	7434
Pyle, Horace A.	RFD No. 2, Coatesville, Chester Co.	817-J-2
Rice, Edward L.	218 W. Green St., Waynesburg, Greene Co.	398
Schadt, John A., Jr.	Lake Ariel, Wayne Co.	2051
Sheldon, S. Carlyle	Conneautville, Crawford Co.	125-B
Snyder, Arthur S.	RFD No. 1, Mifflinburg, Union Co.	6-220
Weber, Walter	2300 S. Shore Drive, Erie, Erie Co.	2-2965
Wensel, Charles	Clarion, Clarion Co.	91-W
Wertz, Carl	221 E. Horner St., Ebensburg, Cambria Co.	158
White, Clinton B.	445 W. Neshannock Ave., New Wilmington,	
•	Lawrence Co.	87-M
Wilcox, Paul D.	Canton, Bradford Co.	163-R-11
Womelsdorf, R. J.	241 Pierce St., Kingston, Luzerne Co.	W-Barre 7-5836
Wounderly, W. E.	615 Eisenbrown St., Reading, Berks Co.	2-7181
Cox, Teal J.	748 N. Main St., Coudersport, Potter Co.	305-R
Foor, Earl	Breezewood, Bedford Co.	9017
Barnhart, B. F.	Union Deposit, Dauphin Co.	Crumbines Garage
King, Harry	555 W. Hollam St., Washington, Wash. Co.	

FISH CAN'T LIVE IN DELAWARE, SAYS REPORT

An investigation by the Federal Fish and Wildlife Service has established scientifically that fish can't live in the polluted Delaware River.

The annual catch of Delaware River shad has been all but wiped out—it has declined nearly 14,900,000 pounds, or more than 99 per cent, since 1899—and the Fish and Wildlife Service set out to determine why.

A preliminary report said the baby shad succumb to the sewage, chemical discharges from dye works and paper mills, cannery acids, and coal mine washings.

"Whereas spring freshets dilute pollution in the Delaware during the spring, when the adults ascend the river to their spawning grounds," wrote Louella E. Cable, scientist in charge of the investigation, "the river is at its lowest ebb in the fall, when the young run out to sea.

"Sometimes the dissolved oxygen content

of the water in the Philadelphia-Camden area is zero at this time of year. When this is the case, the young could scarcely survive to reach the less polluted water of the bay."—Bristol Courier.

SHARON—Ducks walking on the backs of fish to get food thrown by sightseers is a sight which the Pennsylvania Department of Forests and Waters is going to protect from now on.

From now on, hucksters are going to be permitted to sell stale bread to visitors to the dam, and parking ground for 300 automobiles will be available near the Linesville-Espyville spillway.

Residents have been protesting the regulations which prohibited cars from stopping on the spillway, and the new Pymatuning Improvement Association has been agitating for action from the state. The group decided that a sight which was worth being in the news reels is also worth having facilities for visitors.—New Castle News.

Mosquito Repellent

A mountaineer of the Ossipee hills uses axle grease; a fisherman at Sunapee has faith in citronella; a man living beside the Connecticut River says 10-cent perfume is as good as anything else—but all outdoormen are agreed that it is wise to have some sort of mosquito repellent in the fishing kit.

There are certain preparations on the market which not only repel flies and mosquitoes, however, but which remove varnish from a flyrod when carried from moist hands to the highly finished piece of tackle. Lacquered steel rods also lose their finish if they come in contact with this fly "dope." Bottles containing such preparations usually are marked: "Do not set on a varnished surface."

Many stream fishermen wear light gloves in fly-time. Among the alders, insects seem to thrive and proper clothing is important for anglers who wade shallow waters, such as rivers or brooks. A hat may be treated with fly "dope". a windbreaker jacket or fishing coat may be sprayed occasionally. High boots or waders keep insects away from the extremities, although black flies sometimes get inside clothing unless repelled by some preparation.

When a fisherman has been bitten by flies or mosquitoes he may have his own method of treatment. Otherwise, it is suggested that swollen parts be washed with strong soap and water after which alcohol or household ammonia may be applied.

(If sunburn is present at the same time this treatment probably would be too harsh.)

When anglers have come in contact with poison ivy they should wash their hands and any infected parts with an abundant lather of laundry soap and water and apply iodine to keep the poison from spreading.

It may be necessary to consult a doctor in extreme cases of fly bites or ivy poisoning.

A great majority of fishermen do not appear to suffer from insects or ivy, however. They admit to possessing leather skin and say flies die after biting them.

Camping outdoors or in a tent invites the companionship of the wicked little stingers and buzzers, far through the night. Especially after a rainstorm or summer shower are insects voracious in the woods. Interiors of tents should be thoroughly sprayed with any good insect spray. A smudge fire should be built when sleeping bags are used without further protection.

Moving easily along a stream behind the

smoke-screen of his own corncob pipe suffices for the old timer but the newcomer to summertime fishing may not have the right frame of mind about flies after the first bite or two.

ANGLER

So, he will remember to include a bottle of fly spray in his kit when he starts off fishing and his creel or pocket also will contain some fly salve or liquid "dope." Then, he need not return home swolen and unhappy because he got plenty of the wrong kind of bites.—Reprinted from the Federated R. I. Sportsman.

Kresge Foundation Makes \$5,000 Gift Toward Fund to Endow The Jack Miner Bird Sanctuary

When Jack Miner celebrated his 79th birthday on April 10th last, his home town gave him the greatest ovation ever given a Canadian, ending up with a testimonial banquet. At the banquet the Kresge Foundation was represented by Mr. Stanley S. Kresge and Mr. Paul W. Voorhies who announced and presented Jack Miner with a check for \$5,000.00 toward the permanent endowment fund of The Jack Miner Migratory Bird Foundation Inc., which was applauded and has brought unending praise throughout the country.

Speaking of The Jack Miner Sanctuary and its future, the Stratford Beacon-Herald, in an editorial, said:

It is unthinkable that the internationally famous Jack Miner Bird Sanctuary at Kingsville, Ontario, should ever be allowed to lapse in its unique service, when Jack Miner comes to the end of his long and markedly useful life. Fortunately, the Jack Miner Migratory Bird Foundation Incorporated has planned soundly against any such disaster. A trust fund is being built up of gifts and bequests, with the objective of perpetuating Mr. Miner's home and sanctuary in its entirety, together with ambitious developments in the interests of new generations of Canadians and Americans and visitors from abroad.

In addition to a strictly trust fund of \$1,000,000, the Foundation—like the 80-year-old patriarch whose vision and energy and love of living things have been the fount of the great educational project—aims at another \$250,000 with which to purchase outright the 1,600 acres of Jack Miner Bird Sanctuary not now owned by him, in order that the whole 2,000-acre area of the sanc-

tuary may be secure for all time. At present, only 400 acres are actually the property of Jack Miner and the Foundation. The goal is a public institution—an international park, with clubhouses for Boy Scouts and Girl Guides and a community church. Mr. Miner's bequest of the sanctuary is an inspiration that should stir the generous impulses of thousands of people who recognize the educational value of the project.

It is like painting the lily to heap praise upon the world-wide plaudits that have been sounded to the honor of Jack Miner. Last June the King conferred upon him the Order of the British Empire. Her Royal Highness the Princess Juliana of The Netherlands has declared that: "The work done by Jack Miner is of the utmost value to scientists the world over, and deserves all the recognition it receives now and for all time." The noted U. S. writer, Mr. Irvin S. Cobb. spoke of the revered man as "the greatest practical naturalist on the planet." And public and press, over the years, have praised warmly this remarkable Canadian and Christian gentleman. His work must-and will-live after him, unless the people on both sides of the international border pass up the privilege embodied in the simple appeal: "When making your will, remember the Jack Miner Migratory Bird Foundation."

ANGLERS ASK VACATIONISTS TO STOP STREAM POLLUTION

By JOE O'BYRNE

Numerous fresh water fishermen have requested us to make an appeal to vacationists, and particularly picnickers, to be more considerate when they spend the day on the banks of streams, or on the shores of lakes.

For some unknown reason many of these people believe that throwing bottles, tin cans, refuse and leftovers into the water is the proper way to dispose of this debris, when their outing is over. Many campers also dump all their trash along the banks of streams.

When the water rises after a freshet this junk is washed into the stream and the currents deposit it in fishing holes, and in areas where children wade and bathe.

It would be serious enough if the streambed, in the immediate vicinity of the picnic were covered with broken bottles, tin cans, etc., but unfortunately these pieces of glass and cans are tumbled over and over by the streams and distributed along the entire length of the streams, from the headwaters to the sea.

Refuse Causes Accidents

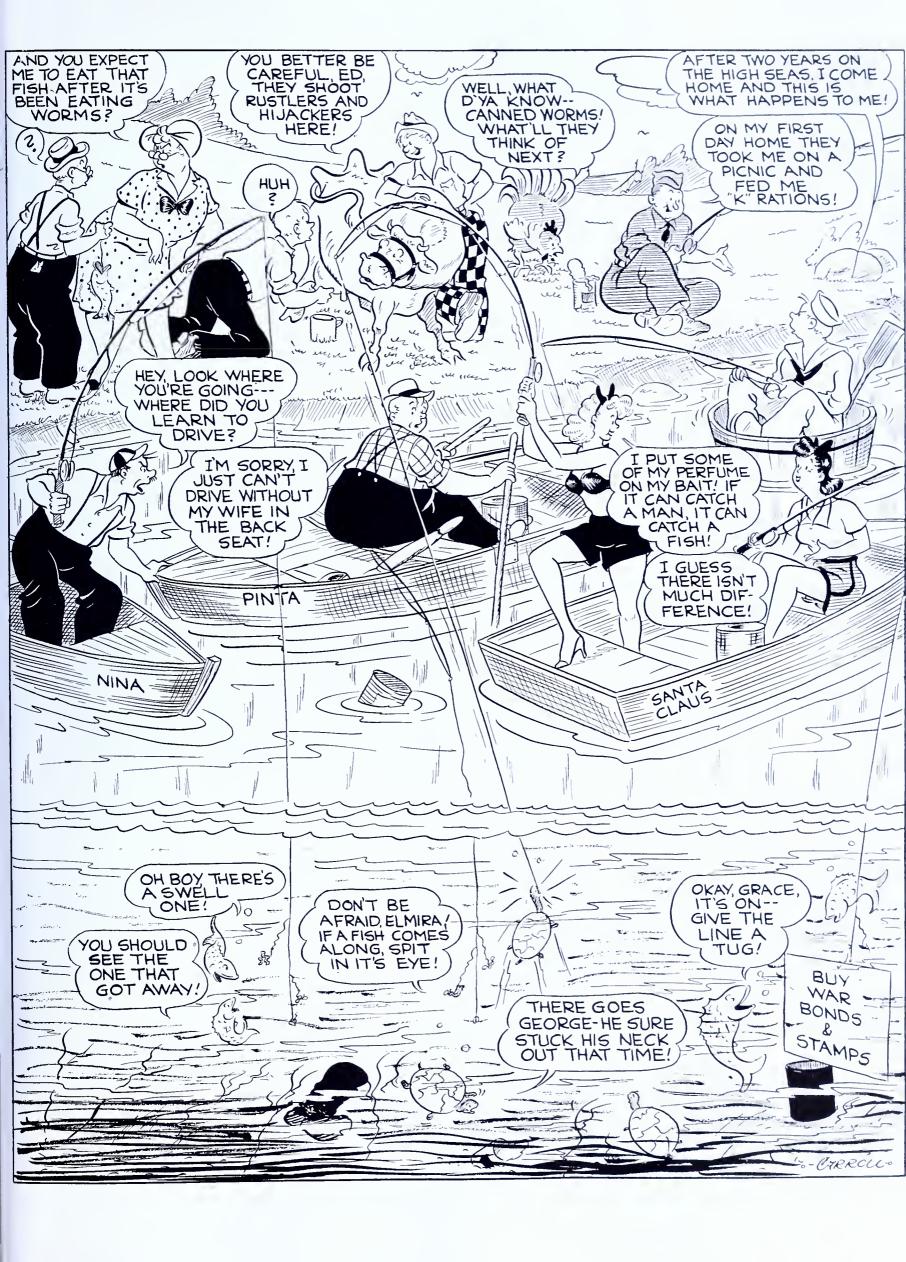
If the offenders could see the deep gashes cut into the heels and feet of children (grown-ups, too), who stepped on these broken bottles, or the nasty cuts inflicted by the sharp edges of tin cans, this practice would stop immediately. The sad part of it is that these accidents usually happen miles away from the actual spot where the refuse was thrown into the water.

Beautiful bathing beaches are ruined and made useless when covered with this refuse, not forgetting the fishermen who wade the streams during the fishing seasons.

There is a fine imposed on those who use the State waters for dumps, and it is the duty of everyone to help keep our streams clean and report all violations.

—Philadelphia Inquirer.

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ANGLER **



September, 1944



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EDWARD MARTIN

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Cover Picture:

Charlie Wetzel fishing the Paradise on Spring Creek

AINT BASS FISHING FINE?

When life's fleeting sands creep to the deep strand, And you press to hold with a tighter hand; When the laps seem long in the daily race, And you draw reserve to weather the pace; Then hark to the purr of your bonnie reel; Hie to the waters with luring appeal And go a'fishing in your little boat, With pipe, pouch and weed in your outing coat. Be off from the streets and the marts and men; Away from the crowds, the rush and the din And croon to Natures' all jubilant notes, Where the big bass lurk by the lily floats, Ride on the sunbeams where memories rise, Of happiest years 'neath kindliest skies. Recount the glad days with your best of friends, Who'll stick to you to uttermost ends. -No life so empty, no mortal so cold As the friendless man who is growing old.

When the season's in and the skies are fair, There's music a'wing, there's gold in the air. Then the bass is king and a fighter bold; Within the fish realm he's regal as gold. On days when he sulks and he will not brave, He's a whimsical and obstinate knave. So then bide your time till his mood is right, Just light your old pipe, smoke up and sit tight. Men too are moody through off days and rain; —Hope for the morrow is the sportsman's gain.

King Bass spots the man whom he can out-bluff; He's a strategist and he knows his stuff. He'll fight to the death, without thought of fame; He always strikes first and plays a hard game. He's sly and cagey, with plenty of spine, And he's out to win when he bucks the line. He counts man a dud whom he can out-class; —There are tricks to learn to out-wit King Bass.

Can you face hard luck? Does your temper rise? Do you gloat or brag—overstating size? Commune with King Bass, be clever and frank If you'd be a sport of the upper rank. Candor and patience are two golden hooks; See Page 1, Rule 1—all bass fishing books. Were bass easily caught, did we get each wish; Then sport would perish—Bass would just be fish. Life does have its cares—and I have had mine. Keep plugging and—say! Aint Bass fishing fine?

RAY S. BROWN, June '44.

HOW TO CAST A BAIT ROD

By ROBERT PAGE LINCOLN

Reprinted from The Southern Sportsman by permission of the Southern Sportsman Company, Austin, Texas

OF THE subjects interesting and instructive to the fisherman, that of how to cast with the bait rod has been dispensed with in so many words or no words at all. I have just gone through ten books on bass fishing and bait-rod practice. Not one has anything to say with regard to how the fisherman should go about casting. Several handbooks which have, in desperation, been turned to. have proved inadequate, if not actually inaccurate. Only one book I have, that by the late William G. (Bill) Vogt, "Bait Casting," for which I wrote the introduction, has a chapter devoted to casting with the short rod and the quadruple multiplying reel; and I still believe that Bill failed to put his ideas across. I regard Bill Vogt as one of the best bait- and fly-casters that ever lived. At the same time he was probably the worst fisherman.

There are certain things that should be made clear about both bait casting and fly casting; the fact is, a little debunking won't hurt. Chiefly it is this, to-wit: Casting on paper and actual casting are two quite different matters. The prim, precise manner in which you are supposed to hold the rod, your stance, the movements of the rod coming and going, the delicate wrist motion and a hundred other things are all properly set down on paper-especially so in fly casting. If the fisherman were to follow these directions he would be thinking 98% about what he was doing with the rod and 2% about what he was aiming at. It should be the other way about. For instance, in fly casting, one writer succeeding another has told you that you must perforce hold the elbow close to the body when fly casting, in fact, to keep it there, all movement being concentrated in the forearm and wrist. To help you to remember to keep your arm thus against your body, one writer has recommended holding a paper under it, while another actually concluded that one could go places fly casting only by tying the arm to the body, thus to get you in the habit of holding that elbow against the ribs. Yet, what happens in actual fishing? I have watched one flycaster succeeding another, experts all, go through the routine of casting on the stream, even the incomparable Bill Vogt himself, and may my name be Meyers if even one of them obeyed that "elbow-tothe-body" rule addressed to the beginner. Invariably the elbow was nowhere near the ribs and much of the time the arm was actually outstretched. We never said anything about it simply because no one would want to be reminded that he was not following the rules specifically laid down on paper. What happens in fly casting also happens in bait casting. In the latter, still more revolutionary arm movements are met with, even in the best circles. The foregoing is merely proof that in actual baitcasting practice there are a freedom and latitude of arm movement that must appall some angling authors. But that is as it should be.

Successful bait casting is not conducted without the presence in your hand of a first-class outfit. The fact that most beginners have outfits that beg the question, cheap reels and cheaper rods, mostly stiff as stove pokers, makes one wonder how the finer art of bait casting can be mastered utilizing such materials. Yet aside from saving that you must have a good outfit to learn with, beyond that we cannot elaborate. I might say, however, the closer you keep to the fifteen or twenty dollar mark in picking either a bait-casting rod or a bait-casting reel, the more certain you will be of having something you can really cast with.

Yet, hingeing on the above, come other things that have to be settled. The kind of rod, its material, etc., is of consequence, as is also true of the reel. Can you learn bait casting better with a bamboo rod than a steel rod? Is one a better fishing rod than the other? These are all things that come up when tackling the subject of how to bait cast.

There is one safe rule I have always followed regarding bait-rod material selection; that is, you have to try both steel and bamboo for yourself to decide your likes or dislikes in the matter. If I should tell you without further ado that there is no material like the seamless tubular steel for a casting rod, there would rise up thousands of bait casters who like the bamboo, to berate me. For instance, I prefer seamless tubular steel for a bait-casting rod but my friend, the "fishingest jedge," will tolerate nothing but bamboo. So there you are. I may mention, however, that with either a good bamboo rod or a better grade seamless tubular steel rod you can absorb everything there is to learn about bait casting. Fact of the matter is, I got my training in bait casting in the long ago with the bamboo rod. I might add that bamboo is unequaled so far as fly-casting rod material goes, regardless of how it may be considered as a bait-rod

Can you control your casting better with a rod having an offset reel-seat than one with a straight reel-seat? Usually your offset reel-seat is identified with your steel reds, the straight reel-seat being associated with the bamboo rod. I like the offset reelseat because it sinks the reel low enough down so that the thumb has easy access to the spool. My objection to the high reelseat is that you virtually have to reach for the spool with your thumb. I would say that better control over your reel is had with an offset reel-seat. Here again individual preference must be sought. I have actually found bait casters who could not tolerate the offset reel-seat, believe it or

So far as the reel is concerned, here again a number of considerations must be taken into account. There is no gain-saying the fact that one of the blessings bestowed upon the bait-casting reel is the level-winding device. Obviously this was meant to coun-

teract the great American backlash, which task it has done very well, although let us not forget that, equally with other reels, a level-winding reel can also throw a bird'snest of violent proportions. With an observance of proper thumbing, however, which must be done on the level-winding reel as with any other, best results are obtainable. Long-distance casters invariably use a reel free of any aid devices, controlling the destiny of the line entirely by means of an educated thumb. Such individuals centend that the level-winding device slows up the momentum of the revolving spool, thus limiting the amount of line one can put out, and, therefore, the length of the cast. Thus, to a tournament caster, where casts up to 300 or more feet are made, the use of a level winder is manifestly out of place, as nothing must slow up the momentum of the revolving spool. But one asks: Whoever heard of such long casts as the above in bait casting? Who, indeed? The fact of the matter is that fully ninety-five per cent of all the fish you catch bait casting, are taken at a distance of 40 to 60 feet from your casting location, in a boat or on the shore, as the case may be. Since your level-winder takes care of casts up to 70 or 80 feet, on occasion, it is perfectly well fitted to handle all bait casting you will want to do, that is, where fish are actually to be taken. If you want to cast strictly for distance, that's another matter. Obviously, for such distance casting the non-level-winding reel is the recommendation.

Something should be said about light and heavy spools in bait-casting reels. Originally light spools in reels were identified solely with tournament reels. Heavy spools were found in the everyday reel. The latter had good selling points. You could spin the reel without line on it and the heavy spool would revolve, often with amazing speed, ease, and freedom. Invariably the fisherman seeking a reel would spin it. The one that would spin longest was the one that chalked up the biggest sales. But the truth is that when the line is applied to the above-stated reel, that smooth-spinning proclivity is rather summarily dispensed with. It doesn't do so well. On the other hand, the light spool, in aluminum or alloy material, spins but fairly without line on it; but, given line, it turns in a rather surprising performance. The heavy spool with line on it is slowed up; the light spool with line on it increases casting possibilities. That is sooner or later learned by most fishermen, and it is one reason why light-spooled reels will be more than ever the vogue in the future.

The line you use in bait casting demands no little attention, certainly more than it is given by the rank and file. The caliber of that line and its pound-test may have much to do with how well or how poorly you cast. It is a fact that will be agreed upon by most sporting goods stores who supply the rank and file of fishermen with their lines, that there are far more heavy lines sold for bait

casting than light lines. In some sections of the country there may be a reason for this, as in the North, for instance, where the great northern pike and muskellunge often share the waters with the bass. Thus while bass fishing, one might inadvertently stumble across a big musky. It is not that a large fish cannot successfully be landed with a light line but rather that one is forced at times to use strong-arm methods, having hooked a large fish, to turn the critter away from the pads and obstructions out into deep water. All in all, feels that fisherman, I'd rather not take chances. So a heavy line of around 24-pound test is almost always picked.

Now if you are casting heavy musky spoons or plugs, your line must be selected to conform to the weight of those lures. Here the light line is manifestly inadequate for the purpose, as it needs body to it to carry through with a heavy lure. If you have ever tried casting a heavy musky plug or spoon with a 12-pound test line you will know what I mean. It will definitely prove lacking. Only with a line of about 24-pound test will you have success casting such large lures.

In proportion to the lightness of your lure should your line be picked as to poundstest. I would say that for casting average half-ounce to quarter-ounce lures, the 12pound test line is, without doubt, the best, although the quarter-ounce lure works well with the nine-pound test line. As to whether that line should be a soft braid or a hard braid is answered by the statement that years ago the soft-braided line was quite all the vogue. Today one rarely sees the soft braid, save among tournament casters, accuracy casters, etc., the hard-braided line being by far the overwhelming favorite. It is not too harsh; at the same time it outlasts the soft braid, which often has a tendency to core-rot. That is impossible with a hardbraided line that has been waterproofed in the making at the factory.

How many have tried to learn the art of bait casting with a 24-pound test line I do not know; possibly the number would be legion. I would say that a 12-pound test line—a hard braid—and a half-ounce casting weight would give you a good start. Your first efforts with your casting weight need not be on water; any closely-clipped lawn will do, where there is no interference, i.e., branches and trees. Place newspaper "targets" on the ground at 40, 45, 50, 55 and 60 feet from you, just single sheets, not double ones. Of course, the impulse of the beginner is to try to cast a hundred feet right off the bat. We take that for granted. But curb that weird desire and concentrate on the distances above given, which are, in fact, your actual fishing distances—the distances at which you really take fish. Leave any possible long casts for experimentation at some later date.

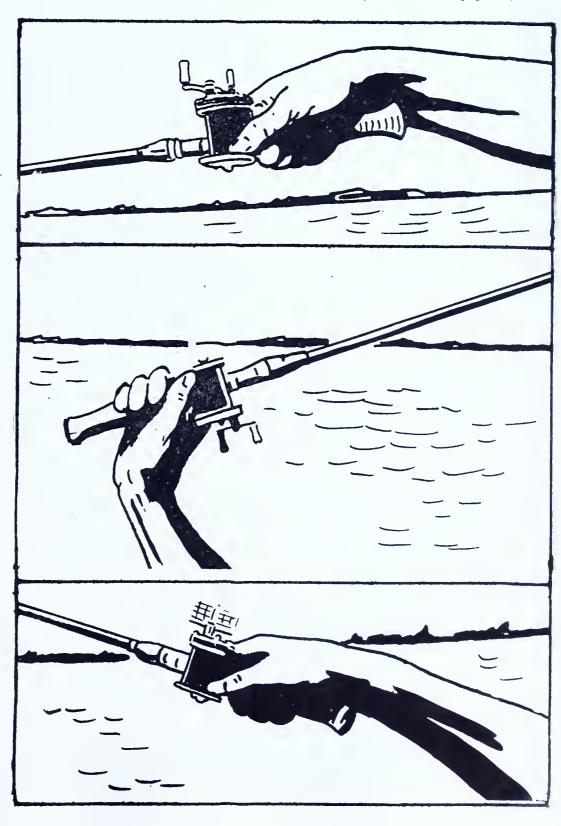
You are now ready for the overhead cast, this cast being straight up over your shoulder and then forward. To cast properly (and this is important) the bait or casting plug should hang about six inches below the rod tip. This gives a certain balance or "swing" that words cannot explain but which you will recognize when you have the rod in hand and the bait hanging at the given length. If more than six inches, or less, the balance is thrown off. It is important to remember this at all

times, not only when you are learning to bait-cast but later on when you are actually fishing.

Rarely, if ever, to my knowledge has it been mentioned in going through the various bait-casting moves that you aim the rod at the target or point you are casting to. The importance of this cannot be exaggerated. I may modify the above by stating that you need not point the rod like a gun directly at the mark with the tip (for the tip can be down), but the length of the rod will be lined up with the target. The illustration will show what is meant. This is the forward position. The instinct of the beginner is to have the reel, with thumb on it, facing up. Not so. The reel should be turned left with the handle straight up (for right-hand casting). In this position the rod is now carried upward in a straight line with the right shoulder, and close to the face, but a few inches from the ear. You halt the cast with the reel hand and reel just opposite

the ear or temple. The rod at the termination of this back position will be, not at a 45-degree angle but rather at a slant back at about a 20-degree angle. To drop the rod on the back position to horizontal or below horizontal will make for ineffective casting, as the further the drop in back the greater an arc will the lure have to essay in going forward to its mark. This is a point that never has been clarified by those who have written on this subject. On the back cast, therefore, the rod should be at about the stated 20-degree angle; at least it should be above horizontal. The forward cast is made from the stated position of the rod last described. Fig. 3 shows the rod at the termination of the forward cast. As the lure shoots through the air the thumb is not taken off the spooled line on the reel barrel. It is released just enough so that you can feel the line brushing against the thumb. But as the lure goes forward and slopes down toward

(Continued on page 13)



THE LIEUTENANT GOES BUGGY

By FRED. EVERETT

Sketches by the author

A S you all know, the Lieutenant is nuts about trout fishing. With the dry fly, of course. Whenever he can waylay his old crony, Doc, he regales him by the hour about the intricacies of the pure art of casting feathers on liquid pools to deceive the most wiley of all fish.

To listen to Lieut., he is a past-present-future master of that art. Truly, a noble art, peer of all fishing methods for the most regal of all fish. The trout season, to him, is the only part of the year in which he lives. The rest of the time he just exists. At least that's the impression one would get if listening to some of the arguments he and Doc have when sore toes and aching tummies quiet long enough for Doc to "set for a spell."

Well, anyway, that's the way it always had been. "Had" is the correct word. Tonight the sky fell on Doc, leaving him completely bewildered in the darkness of unbelievable improbability.

Doc knew he hadn't fallen asleep while Lieut. talked because it hurt when he pinched himself. And there was no question but what the one he was talking with—or better, was listening to—was his old side-kick Lieut. Yet the words that were coming out of his mouth just didn't belong! Lieut. couldn't be saying them. Not unless he had gone completely buggy.

"'S funny," Doc was muttering to himself, "may be he has cracked under the strain of waiting for the second front and having it break so suddenly and successfully. Often a man holds up under unbearable burdens and doesn't weaken until the job is done. Or—maybe lack of gas and trips to the trout waters have taken their toll. Whatever it is, poor old Lieut. isn't the same—he sure has changed."

The Lieutenant wasn't even aware that Doc was worried and buried in thought instead of listening to his steady flow of words. Lieut. was always too absorbed in

his own ideas to even dream that anyone else was not thrilled to listen or could possibly let his mind wander off on any other theme.

Doc, however, was a true medico at heart. When his patient showed such signs of unnatural behavior and thoughts, Doc just had to try to diagnose the case. Somewhere, somehow, something had affected Lieut's thought processes.

How else could he ever have said that bass fishing is one of the greatest sports?!

Not that Doc didn't agree. On the contrary, he had had the same fight every year to try to persuade Lieut. What a real sport it is and to get him out on the bass waters. But not Lieut.! He pooh-poohed the very thought of sitting in a boat and pulling dumb fish out of warm lakes. Nothing but the cool, fresh waters of a trout stream were good enough for him. Only the chance to wade a smallmouth stream could entice him out for bass so long as the trout season was open. And then only when he couldn't travel to a trout stream.

Yet it was only July third and there sat Lieut., trying to tell Doc that they should go bass fishing instead of going on their annual trout trip for the Fourth. Why, for twenty years, that trout trip had been their traditional way of celebrating the Fourth of July. And Lieut. was a sentimental lover of tradition—when it meant a trout trip.

Lieut. talked on and Doc mulled over his thoughts, trying to put his finger on the deadly symptom. For some reason, he failed to remember that Lieut. was a scientific fisherman. And, like a true scientist, he had to explore every new possibility by thorough experimentation. Lieut. had a new scientific project based on theories dear to his heart. He would never be happy until those theories had been put to the test. He'd even go bass fishing on the Fourth!

In the midst of his ponderings, Doc sud-

denly became aware of an ominous silence. With a guilty start, he looked at Lieut. His friend sat scowling intently at him, a puzzled expression, mingled with impatience, deepened the permanent wrinkles in the browned skin on his forehead. His lips twitched in a half smile.

"Well, what do you think of it?" he demanded.

Doc hadn't the slightest idea what "it" referred to. But he took a chance. "Oh, swell." He always felt safe in being a yes man.

"Then I'll pick you up early enough to be there by daybreak. Let's say about 4:30."

"What?" Doc gasped, "That means I'd have to get up by 3:30 to have breakfast and be ready."

"Certainly, if we are to go to both places. What's the matter, are you getting too old?"

"Skip it. As I remember it, you always said respectable trout didn't want callers before 9:00 A. M. What's all the rush?"

"We probably won't reach the trout waters until nearly noon, not then if we don't get started on time. See you when the rooster crows."

So saying, Lieut. unwound his long legs, grunted up from the easy chair and yawned his way out of the house and into his car. Doc stood undecided whether to call after Lieut to find out what all this was about, or to take a chance on what he had unwittingly agreed to do. Before he could make up his mind, Lieut's car was on its way. With a sigh of resignation, Doc headed for the stairs and a possible five-hour sleep.

One thing you've got to hand to Lieut., when he says 4:30 A.M., he's there not later than 4:29. Doc was still making toast to go with his last cup of coffee when his friend barged in.

"Hey, what's the idea? Come on, snap out of it, we're late as it is."

Doc glanced significantly at the clock and calmly buttered the toast, poured some coffee in another cup and motioned Lieut. to sit down and join him. Instead, the early bird picked up Doc's fishing gear.

"This all you're taking?" he asked, surprised.

"Sure—that's what I always take." Doc answered. "Think I need a whole tackle shop, like you do?"

"Okay—if that's the way you want it. Only I thought you'd want to join in the fun, too."

Lieut. carried the stuff out to the car and put it in the trunk. Doc wondered a moment what he meant by that remark. But he soon forgot it as he finished his meal and went out to the car where Lieut. had the engine running, anxious to be on his way.

"No wonder all your patients die, you're never on time."

"You're the only dead one I have right now," Doc grinned, "Too bad, too, because you'd still be alive if you hadn't belly-ached so much."

"Huh!" Lieut. snorted, "Wait 'til I start (Continued on page 14)



THE BIOLOGY OF THE MAY-FLY

By JOHN PARENTE

THE May-flies, commonly called Day-flies, Lake-flies, or Shad-flies, belong to an order of insects called the Ephemeroptera (Ephemerida). They are familiar on the margins of lakes, streams, and rivers, and the association of their name with Ephemerides of Grecian mythology expresses their brief life above water which in certain species lasts but a few hours.

The first account found in zoological literature concerning May-flies was written in 1661 by a Dutch scientist named Swammerdam. There are between 400 and 500 species of Ephemeroptera that have been classified, but only European and North American representatives are at all adequately known.

Life History

The May-fly is an insect with an incomplete metamorphosis. There is an embroynic period within the egg and an active life which is divided into the nymph and adult stages.

This insects eggs are found to hatch in from 10 to 11 days at a temperature of 20° to 25°. However, since there are many different species there may be slight differences in the conditions for hatching. When the egg hatches we have the nymphal stage, which is the stage that occurs between hatching and emergence from the water. The exact limits of the nymphal stage of this insect are unknown. It may be one, two, or three years, the time varying with the species.

The larva that hatch from the egg have no trace of wings and 'no external gills are present. However, the tracheal gills soon make their appearance. When the larva leave the egg they are in a fairly advanced state of development and all the systems except the reproductive system are com-

plete.

The adolescence of the nymph is evidenced by the development of reproductive organs and the external growth of rudimentary wings.

Environment of the Nymphs

Since there are many different species of May-fly nymphs, they are found to live in a variety of different places. Each specie is adapted for the place in which it lives.

Types of places where nymphs live: 1. Slow Muddy H_2O .

- 2. Mud in rivers, streams, etc.
- 3. Riffles of streams and on wave washed shores.
- 4. Gentle currents.
- 5. Swift currents.

Because of the different environments in which the nymphs are found, certain species differ somewhat in structure. For example, the body structure of nymphs living in swift streams will be found to be different from the body structure of those living in quiet waters. A discussion of the body structure of three sub-families of the May-fly will serve further to illustrate this fact.

- 1. Ephemerinal-bodies elongate, more or less cylindrical, tapering at either end. (Live in mud along shores.)
- 2. Heptageninal-Head, body, and all ap-

- pendages depressed. (Inhabit swiftest H₀O₀)
- 3. Baetinae-The body form varies somewhat in this group but the most representative form is a slender compressed body and rather small rounded head. The legs are long for running and jumping. Other nymphs that belong to this sub-family have their body shortened and it is flat on the Ventral side and thick through the metathorax. (This type of body is most marked in those which dwell in mud exclusively.)

Definite problems confront the different species of nymphs in their habitat. The mud-dwellers are confronted with the problem of burrowing in the mud. Those living in swift streams have the problem of retention because they may be washed away easily, and the nymphs inhabiting standing water have the problem of locomotion.

It is interesting to note that certain structures found on the dwellers of swift streams will be found to be lacking in species that inhabit quiet water. The swift stream as a habitat is more specialized and restricted than the lake or quiet stream and the predominating problem in streams of this type, which is retention, has been met by certain adaptations.

Adaptations of May-fly nymphs to swift water may be classified into three groups, namely:

- 1. Those which enable nymphs to swim vigorously through the water.
- 2. For withstanding swift current by holding to the bottom.
- 3. For avoiding the current by crawling into crevices.

It is obvious that specializations which offer the least resistance to the water are an advantage to the first two groups and they meet this situation in two different wavs.

- 1. By possessing round bodies.
- 2. By possessing flat bodies.

Round Bodied Nymphs

Legs are larger and are for attaching the nymph to the bottom of swift water. animals face the current and the legs are held out in front. The legs deflect the H2O in such a way that the force of the stream presses them against the bottom and since their bodies are excellently streamlined, very little resistance is offered.

Flat Bodied Nymphs

The body of this type is greatly compressed, resembling a streamlined body cut in two from end to end with the flat side closely applied to the sub-stratum. It has a sucking organ on the flat side which is formed from the gill plates. The head is strongly flattened and its edges are expanded so that H2O doesn't get under. This type of body structure is good in swift flowing streams only, and is found where the current glides swiftly over a smooth bottom. The most successful species of May-fly nymph in swift streams is not the flat form but the round bodied nymph, however, flat bodies are probably primarily utilized for

creeping into narrow crevices under stones and in only a few species has the flat body been utilized, by the addition of strong adhesive structures, to allow its possessor to live in exposed places.

There are also certain species of nymphs which avoid the current by living in crevices and under stones. This group constitutes a miscellaneous assemblage of forms not well adapted for swimming or resisting the cur-

Adaptations for Quiet Water

The body of the nymph is beautifully streamlined and a swimming organ is formed by the three tail filaments. The filaments, whose margins are lined with hairs, are usually held apart at an angle from the sosterior end of the body but when the nymph wishes to swim it brings the two lateral filaments in toward the middle tail filament and the hairs interlace and an organ resembling a paddle is formed. Dorso-ventral strokes with this paddle like organ enable the nymph to propel itself through the water. The bodies of some species resemble that of a strong swimming fish or the fuselage of an aeroplane. The caudial filaments of nymphs inhabiting swift water are not provided with the interlacing hairs that are found on the tail filaments of swimming forms.

Adaptation for Burrowing

The bodies of nymphs that burrow are flat and shovel like. The head slopes forward and is pointed. The front and hind legs are adapted for pushing and the fore limbs are also suited for work as in the mole or mole cricket. There is a pair of tusks (teeth) in the jaws which aid in digging. The larvae of these forms begin making burrows as soon as they leave the egg. Those nymphs, living in quiet H₂O, that do not burrow prefer the shelter of stones or timbers.

Structure of the Nymph

Color—The color varies from a pale blue to greenish and it is due to the viscera rather than to pigment in the skin. The eyes are dark brown. The body is divided into 14 segments as follows:

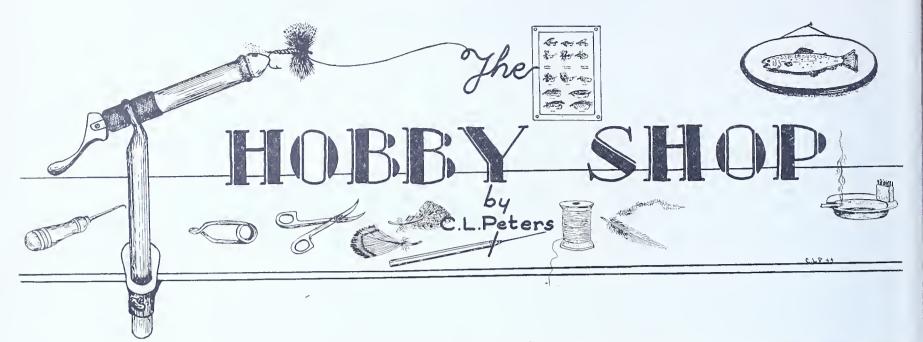
First segment: Eyes-dark brown; An-· tenna—just beneath eyes; Mandibles below antennal; Head-Hairy membraneous maxillal.

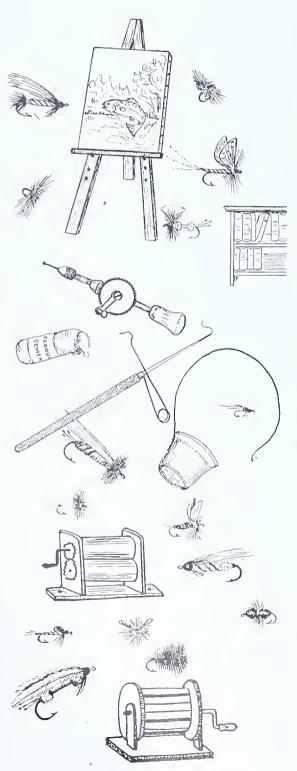
Next 3 segments: Thorax—The thorax is characterized principally by the great size of the middle segment; the prothorax and metathorax being small and insignificant. The deloping wings are found on the second and third thoracic seg-

Remaining 10 segments: Abdomen-There are no appendages on the first abdominal segment, but the next six or seven segments possess trocheal gills. These gills are in constant movement and can be seen easily if the nymph is closely observed. The 10th segment possesses three filaments which may be hairy or hairless according to the habitat of the

(Continued on page 17)







WHEN I went into the matter of planning my modest little home back in 1926, I listened to the little woman earnestly and patiently as she planned the particular details of the kitchen, bath, and living quarters in general. She knew just how it should be and when the house was completed the telltale feminine aspect of her planning was very much in evidence. From the tileboard on the kitchen walls to the special arrangement of the cedar lined clothes closets, the lighting fixtures, the heating arrangement, and the draperies, she planned, and from a list indelibly written somewhere back in the dark recesses of her mind, she instituted as well the many little niceties she either gleaned from magazine or had seen in the home of a friend. She not only planned, but she actually donned the overalls and worked like a trojan to see that the plans were carried out. I almost forgot to mention that a corner of the basement was also included in the elaborate setup for use as a laundry. I had plans of my own too, and when her basement plans began to materialize I began to wonder if my one little dream was beginning to shatter. We set up the laundry and then I immediately began to partition off a good half of the basement. Prior to this time the basement project was not mentioned, and almost at once I began to be interrogated as to the use of the segregated area. I jokingly assured her that no modern home was complete without the well known dog house. Some of my acquaintances have installed in their basements miniature bars and recreation rooms in which they take more than passing pride. It so happens that I can find my recreation, and that of the most wholesome sort, out in the woods and along the stream, so it was not necessary to clutter up the much needed space in my basement with a bar or ping pong table.

My hobby shop, I called it, and that's just exactly what it turned out to be. I am afraid that the only mistake is that it should have been called the hobbie's shop, for I am quite sure that a glimpse will give the casual observer the impression that the owner is quite enveloped in more than one hobby, and neither is that a mistaken idea.

The hobby shop is equipped with a bookcase filled with books on such important subjects as taxidermy, ballistics, hand gun manual, small bore and high power rifle shooting, big game hunting, upland game, woodcraft, streamcraft, stream control, Ph and chemical analysis of water, and stream entymology.

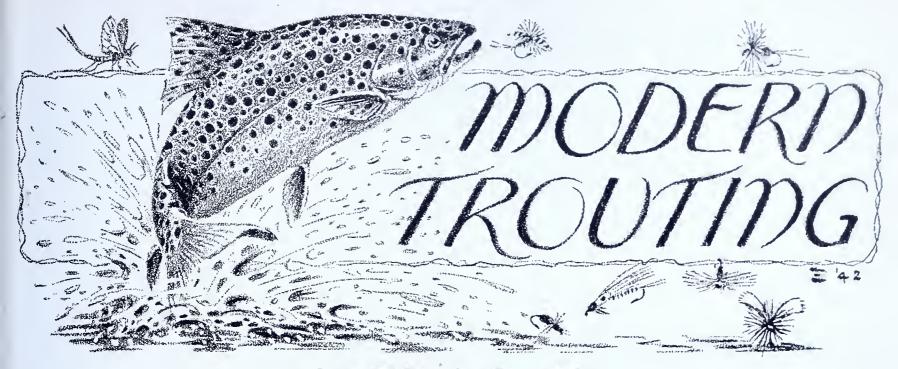
These books cover a rather wide scope of outdoor activity, but they are all so vitally important to the fellow whose hobbies all center on the great outdoors. Next to the bookcase is a roll top desk which houses the typewriter and filed correspondence concerning the opinions of other outdoor lovers about perhaps the merits of a certain fly or the correct way to tie a certain bug.

A small cabinet contains my water testing outfit, a stream sampling kit, a dissecting outfit and sample jars. These are packed in the car during the fishing season and offer no end of amusement as well as information concerning the type of water being fished, especially if the stream is strange and one's knowledge is meager. It is well known that fish are forced to accept a different diet in limestone streams than in waters of a freestone nature. Warmer, slow moving streams harbor insect life that could not exist in some of our rapid mountain streams. The only insects I am quite sure of finding anywhere I chose to fish are gnats and punkies. The pestiferous type that make the pharmacist smile as he is making up your favorite prescription, that wonder of wonders drives the little devils away and permits the user to live. A druggist friend once mixed up a concoction for me that he unconditionally guaranteed, and his guarantee was one hundred per cent correct, but in addition to being colored and causing one to look like an Indian on the warpath, the smell made the skunks in the vicinity turn green with envy.

The hobby shop has a cabinet for the guns and fishing rods. Another small cabinet contains art supplies, such as brushes, pens, crayons, inks, oil colors, art papers and so on. The easel also has its place.

Above all, one entire section of the room is devoted to fly tying and fly tying material. Several dozen drawers contain the preponderance of material necessary to make most any type of creation that the human mind could possibly conjure to compete with the whims of a wily trout or bass. These labeled drawers are always well kept and the material assorted so that I can place my fingers on the needed material without the

(Continued on page 10)



SMUTTING

By CHARLES K. FOX

THE initial hope of the fly fisherman is to discover fish that are actively feeding. When he is rewarded with this situation he then proceeds to try to deceive the trout with his artificial. The most common practice is to employ a close imitation of the natural. Deep engrossment in the business at hand is achieved under such a circumstance, and that psychological state is the ultimate in the sport of fly fishing.

But even when the angler meets this desired situation and although he is grateful that this is the case he often finds himself face to face with a complicated situation. The most common complication is to run into trout actively feeding on midges. At times this occurs when larger food is readily available. But what looks good to a trout and what looks good to an angler are two different things.

Actually the midges, family chironomidae, comprise an important part of the diet of a trout, and we are fortunate that such aquatic life exists. It brings about surface feeding; it increases the carrying capacity of our streams, and it plays its role in growth.

The great fishermen of England have a name for such feeding fish; their term is, smutting trout. The very phrase implies that there is adversity connected with the situation.

The naturals are so small that they are difficult to imitate with a wet fly. Anything we construct appears large by comparison. The smallest fly we have ever seen was tied on a number 22 hook. Such a fly is so small that it does not seem practical for hooking and holding. Even at that we actually received a prick of the thumb once from this implement of angling.

For midge imitations we'll settle on flies tied on 18 and 20 hooks, but our choice is the short shank hook for the reason that we get more bend and barb on the shortest

and smallest practical fly.

George Harvey of State College has one answer and Preston Jennings has suggested another approach. By way of identification George has been called by no less an authority than John Alden Knight, "the greatest trout fisherman I ever met." Preston Jennings of Brooklyn has given us the great entomological treatise, A Book of Trout Flies. Certainly each is an authority among the trouters of our time.

The Pennsylvanian designed or originated certain small, soft, hump-back nymphs, some white, some black, and others of various color deviations. These he ties on 18 and 20 hooks.

Frequently we have watched the nimble Mr. Harvey hopping around the rocks and banks through which flows that part of Spring Creek known as The Paradise. His short light rod and his long fine leader give the little fly the desired action. Most frequently he makes his cast down stream and he generally employs plenty of tip action.

Naturally many fish are missed or lost when such a small hook is used. If the nose of the fish is toward the angler, and this is usually the case when casting down stream, the angler is striking toward the teeth and jaw point of the fish instead of toward the tough corner of the mouth. Frequently the hook merely ticks the teeth instead of hooking flesh or skin and all that is felt by the angler is a bump or two.

But, nevertheless, the midge nymph is effective and on occasion brings forth plenty of action even on large specimens. One of the wonders of angling is that trout of comely proportions will even look at such a minute dupe, let alone snatch it with

The last time it was my good fortune to bump into George he told, with modesty but with satisfaction, of the taking of a great four pound brown trout from the upper reaches of hard fished Spring Creek. The whole incident came as a surprise, for at the time he was fishing for rising brook trout and had no idea that such a fish was in the vicinity. The leader was tipped with a 5x gut point and it required about forty minutes to wear down and land the big trout.

Preston Jennings ties a small dry fly with

badger hackle. The theory is that the dark core represents the body of the fly and the light colored tips of the hackle give the impression of buzzing wings.

Either wet or dry fly fishing is practical for smutting trout, for the fish take the pupa as it moves to the surface to hatch and they take the hatched fly on or even above the surface.

Our own experience, which for the most part has been on limestone spring streams, indicates that the wet flies account for more rises. Far and away the greatest activity along this line has taken place at dusk on the streams we have fished.

Dry fly fishing is considered by many of us to be the most pleasant method of angling, but sometimes we wish to switch to midge wets after it is too dark to see to change flies. It is practical to carry a long fine leader to which is tied a midge nymph and then change leaders instead of flies. Such an operation can be performed with closed eyes. The midge can be fished after nightfall, particularly on silvery strips of unshaded water, or when the moon is bright. Under such circumstances rises can be seen which add to fishing pleasure, and the possibility of casting into vegetation and other obstruction is reduced.

The main thing in this midge nymph fishing is to employ a very light leader. The chief reason for this is not to gain maximum camouflage; it is to achieve effective fly action. Those little flies just don't move properly on anything heavier than 4x. Some of the fellows are dropping down to still lighter tippets. The lighter gut is more sensitive to current and tip action.

A very good fish can be landed on the lightest of gut. If the angler successfully negotiates the strike his chances of landing the fish are good. His strike must be gentle; therefore, a light action rod is an asset.

Every fly fisherman should be prepared to cope with smutting trout, for such a situation is bound to present itself, and trout can furnish interesting smutting angling.

THE SHRINKING OUTDOOR FRONT

By JACK WELCH

This is the second of a series of articles on conservation subjects of Statewide importance prepared by those who conduct the outdoor columns in the newspapers of Pennsylvania. The column title of this author is: Campfire Corner, and it is published in The Erie Dispatch Herald, Lancaster County Sunday News and The New Kensington Daily Dispatch.

REMEMBER when I was a boy in Florida how my dad and Old Man Wallace used to attach the gray mare to a buckboard with chain trace hook-up and drive over to Lake Weir to fish for bigmouth bass. The lake was only four crow-flight miles away, but Dolly had to haul the light wagon along a one-track road that struggled through deep sand, twisting and squirming among scrub

palmettos and longleaf pines. With a few hours of fishing thrown in the trip occupied an entire day. If there were as many as half a dozen other anglers on the large lake the situation was newsworthy and the subject of speculative comment. Now, not so many years later, even in wartime planes are transporting fishing parties to northern lakes hundreds of miles distant, some in-

accessible except by air, and returning them to civilization within the span of a few hours,

For several years before Pearl Harbor cars were whisking hunters and fishermen farther and farther into "last frontiers." Roads were penetrating wilderness areas. The honk of the auto horn drowned out the honking of wild geese and vied inharmoniously with the cry of the disturbed loon. Real estate dealers plotted 50-foot lake shore lots far from the end of steel and uncounted miles of trout streams were brought under private control, as were vast acreages of hunting club "preserves."

War has not halted this invasion of the wilderness. Last fall, in one deer area with which I am familiar, a single small lodge housed 76 hunters during the open season, and this was in a locality some distance from a railroad, a deep woods locale seldom visited by close-to-home sportsmen. This summer a somewhat similar area, dotted with fine fishing lakes, is swarming with anglers and tourists, despite gas rationing and the tire shortage. Reports from public parks in various states indicate that the number of visitors has exceeded anticipations

If anything, the war has lent added impetus to this outdoor trend. Service men on furlough turn from the army camp to the open to forget the routine of regimented life for a time; war workers weary of factory clamor seek refuge in the quiet of lakeside cabins. The general public, with plenty of cash to spend, is turning to the open as an avenue of escape from wartime stresses. Pretty soon—very soon, we all hope-millions of war veterans will be returning. Among the first things many of them will do is unlimber their fishing gear, substitute shotguns and deer rifles for Garands, and hasten to keep a belated rendezvous with sport. Post-war invasion of the wilderness will, because of the mass movement involved, pose the most vital problems those interested in the outdoors have had to face.

How can some vestige of the primeval wilderness be preserved for the present and future generations and the demands of an expanding outdoor-minded public be satisfied at the same time?

To what extent should highways be permitted to penetrate the hinterlands? What additional forest fire protection will be necessary, and how are the increased expenses to be met? How can fish and game law enforcement best be implemented? How insure a fair share of hunting and fishing privileges for the "forgotten man" who cannot afford the expenses of a swanky club or the time and money for extended trips?

Will education through outdoor organizations and state conservation departments transform vandals and habitual game and

(Continued on page 16)



Jack Welch is a nationally known conservationist and outdoor writer.



BAIT CASTING FOR WALLEYES

By CHARLES K. FOX

UNTIL recent years in many sections of the State it was the common belief that the only way in which walleyes could be taken on artificials was by trolling and that was limited to spoons, but such a theory has been thoroughly exploded.

One day a man who had done practically no fishing invited an acquaintance, who had the reputation of being successful with plugs, to fish with him on the Susquehanna near Perdix. The new fisherman had a great desire to catch some game fish but he was: poorly equipped, could not cast, and did not know where the fish were located. He had a brand new boat tied at a big deep section of the river below a series of ledges, but where to go in it and what to do were his problems

His fishing friend had never fished this particular water, but as soon as the two were out there in the boat he took one look and said, "salmon".

Fast water and ledges were visible where the river had cut a gap in the mountain. There was considerable drop in the river and many rocks either broke the surface or were barely submerged. At the base of the last ledge was a large deep hole with currents coming into the head at various points.

The quickly improvised plan was to fish in the deep holes during the afternoon and then concentrate in the pockets between the last two ledges at dusk.

The boat was carefully and quietly anchored above one of the deepest and darkest looking holes below the ledges. The water averaged well over six feet in depth but there was unquestionably pockets of considerably greater depth.

The principles of plugging for "salmon". were then explained by the experienced

fisherman.

"Cast right down over the deep water and permit the plug or casting spoon to sink to the bottom or better yet almost to the bottom. Retrieve the lure slowly and the deeper you can keep it without snagging bottom the better.

"The type and size of the plug are unimportant, however bright finishes seem to draw a few more strikes than the duller lures. The important thing is to comb the bottom."

"Suppose you get hooked up; does that mean we have to go after the plug with the boat?" was the obvious question.

"No, if the lure becomes snagged peel off about 50 feet of line and permit the current to carry this excess down stream below the plug. Jerk the line sharply then reel in continuing the jerking. This will free the plug in the great majority of cases. You see, we do our casting straight down stream so that we can loosen the snagged plugs in this manner. Once in a while, though, we may have to move down in the boat to rescue a lure.

"You will notice that the plugs are equipped with double hooks instead of the customary tri hooks and the hook points are up. If you feel the plug bump along the bottom speed up the retrieve so the lure is working in a slightly higher level. The spoons have single hooks with the hook points up".

The lures used that afternoon were: Heddon's River Runt, Creek Chub River Scamp, South Bend underwater now known as Entice-Oreno or Fish-O-Bite and Lew Eppinger's Dare Devil's Imp.

After about an hour our neophyte had his casting pretty well under control and he then received the thrill of getting his first strikes and landing his first fish on an artificial.

Fishing went well that afternoon and each of the lures tried drew some strikes. Fish were hooked, played, missed, lost and landed.

When evening arrived attention was centered on the pockets in the ledges. It was not necessary to move the boat very much. The main difference was that the evening casting was up river instead of down and the lures were fished faster and nearer the surface. A few more strikes resulted before darkness set in.

On this particular afternoon the fish ran about average size for the Susquehanna most of them from 19 to 23 inches in length. A few of the best were kept and the others were returned to grow and furnish thrills some other day.

These fish are rapid growers and prolific. If the fish returned should have lived another year, by the following fall he would have a good chance of attaining the two foot four pound class, and what is probably more important he would have another season in which to spread their scion in the watershed.

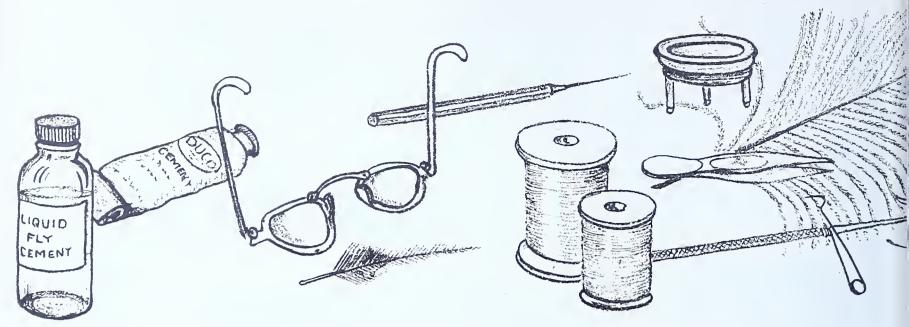
Walleyes are gregarious and when a strike is forthcoming from a spot it is safe to assume that there are more fish in the immediate vicinity. On one occasion we saw eighteen taken by one fisherman as he stood on one spot. These however, were all little fellows and although of legal size all were returned.

Large fish and small fish generally do not school up together and the schools vary in size. It is the belief of some that often there will be less than one dozen large fish together and usually considerably more than a dozen smaller fish in the same schools.

If there are shallows and good ledges above the deep hole in which walleyes are known to be located they can be counted upon to frequently move into such spots in the eve-

The facts that the walleye is a good striker and an unsurpassed food fish make him popular with the pluggers. Many of the fishermen who fish the larger streams primarily for bass are turning to the deeper stretches and to the heads and tails of deep spots to pick up a "big salmon" at the close of day.

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THE HOBBY SHOP

(Continued from page 6)

necessity of a search warrant. That's as far as tidyness goes in the hobby shop. At the height of the fishing season when a fellow needs a few flies of one pattern or another for one day and then a different one for the next few days, who wants to take time out to put everything away in its proper place.

I mentioned that the wife took great pains in planning the kitchen as she wanted it. From the moment that it was finished it was hers, and I want no part in bossing the culinary end of the house. It is kept immaculately clean. I think that if I were to see the kitchen as unkempt as my fly tying table at times during the periodic spasms of extreme activity I would probably be looking for an easy excuse to dine out.

Oh yes, she has offered to kindly assist me in cleaning up the table when it becomes rather cluttered with material, but no dice. She has even planned that at some convenient time when I was content along a stream for a few days would be an ideal time to invade my private domain armed with a vacuum cleaner.

Brothers that's where I draw the line. The hobby shop remains inviolate. Not that I am adverse to sanitation or cleanliness, but do you ever get the house cleaning blues? After it's all over you grope around in the dark for several weeks hunting for some item that you had put into some special nook or corner for safe keeping. Nope, the hobby shop is mine, and I don't mind saying that I'm selfish about it. The women folks are welcome to use it if they wish, and my wife has her own fly tying vise, and uses it frequently, but bless the person who trys to invade my sequestered sanctum with an eye to cleaning house.

When one once gets the fly tying bug, there is not a whole lot to be done about it. You simply must keep abreast of the times and develop the food of the fish you are trying to catch, or at least a fair duplication of the natral, at least so we reason. Whether or not our duplications look as good to the trout as they do to us is a question I'm not able to answer. You'll have to ask the trout that one. Anyway, we have a glass case that can be filled with water and the flies viewed from the bottom (a trout's eye view). Placed on a pedestal in the back yard one

is allowed to view the flies through the water with the sky as a background. Crazy you'll likely say, and sometimes I wonder myself, but then, wasn't Columbus considered slightly off the beam when he advanced the theory that the world was round? Weren't the Wright brothers considered in some circles as being a mite balmy? Any way who cares what the untried neophyte thinks as long as you are satisfying your own curiosity and perhaps stumbling blindly onto some added information that will be of interest to posterity.

A glass viewing case is not the only gadget to play around with. I think no other profession uses more gadgets and gimmicks than the magician. Next in order is the fly tying bug. After a few years of fly tying, one is amazed at the amount of junk he has amassed. These gadgets are not necessarily all used in the fly tying art but are necessary in the proper use of the wares you turn out at the vise.

Among these gadgets is a large reel line drier. For years we dried our lines by winding them on a Mother's Oats carton in which was placed a small light globe. Later we abandoned this idea for the reason that we found that drying slowly in the open air did not cause the lines to deteriorate as rapidly. These driers have been pictured by other hobbyists in the Angler from time to time and can be easily constructed by the average individual.

Another device that has served its purpose many times over is a small box set on an axle, and supported by two bearings, with a pulley to transmit power from a discarded electric fan motor. This arrangement is used for rapidly drying dyed feathers. Another method of quickly drying and fluffing washed or dyed feathers is to place them in a discarded silk stocking, if you are fortunate enough to find one, and hang the stocking in front of an electric fan. Dyed hair can be dried more rapidly if after a thorough rinsing from the dye water it is pressed between a discarded desk blotter to absorb the excess moisture.

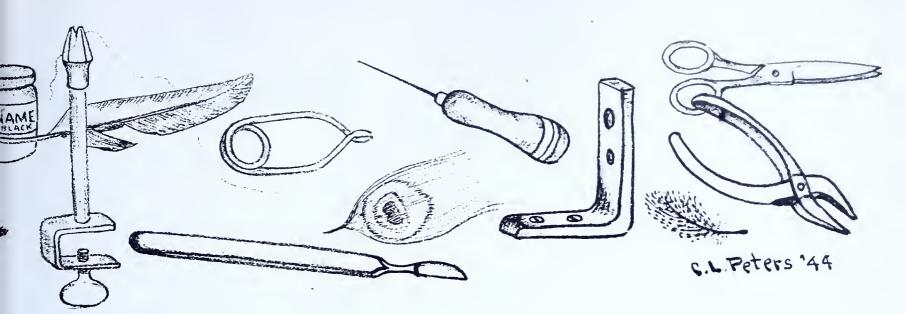
Several tooth brushes of the 5 and 10 cent store variety are hanging conspicuously above the work bench. These are the handiest means of cleaning guns, reels, etc., that we have found. A jar of gasoline and a tooth brush make a good combination for cleaning gummed up reels, after which a good graphite lubricant should be used.

One of the most novel, yet very useful gadgets I have in my ever increasing collection was born in the mind of a friend one evening while he was watching me tying some Breadcrust flies. I was using the rib of a hackle as a quill in order to form the body and some of the hackles were rather stiff and just about uncontrollable. He got the idea that if the quill was flattened it would be easier to wind around the hook, so without further ado he set about devising a means of flattening the hackles. The following evening he was again a guest of the Hobby Shop and produced the solution to tying the unruly hackles. The hackle trainer as he called it is made up of a pair of rollers set between solid upright standards, with small gears attached to each roller and a handle on the uppermost roller, it has the general appearance of a wash ringer of the older type. By placing the hackle between the rollers and turning the handle the hackle is forced through and comes out flattened. Later we found that by soaking the hackles in warm water before rolling and tying them to the hook immediately they were as easy to handle as the tving thread itself.

A pair of spectacles, with very strong lenses are kept in the drawer of the fly tying table and used only when tying the very smallest of flies (sizes 20 and 22). These are a very decided aid in turning out these very tiny midges, the disadvantage being that they should be used very sparingly for fear of ruining an otherwise good pair of eyes. When I am called upon to make these tiny creations I like to work at them before retiring in order that my eyes may then be thoroughly rested.

A magnifying mirror attached to the vise is also very helpful in tying tiny flies. Aside from the advantage in tying small patterns, it gives the tyer an opportunity to see both sides of his work as the operation progresses, even in the very large sizes.

Another appendage to the vise is the hackle guard. I have a set, with one attached to the vise, although I very rarely use it. Anyway I suppose it helps to make the job of turning out good flies look more professional to the uninitiated. There are times when an obstinate hackle will try to play tricks by reversing its position, but the best way to remedy that is to take it off and replace it with a good feather, as a makeshift will never be a good fly, and if



you try to force it into position with a hackle guard you will likely discover that your finished fly has the hackles grouped too close together.

I suppose it was because it had to do with fly tying that I bought a whip finisher some years ago. It does everything that the manufacturer claims alright. On large flies you can whip a head on a fly equally as well as by hand. You will notice that I said equally as well. Anyway it can be done equally as well and in less time by hand, so the whip finisher reposes on the rack with a lot of other decorative effects of the hobby shop.

At the one end of the bench I have attached a simple but ingenious device for making deer hair mayfly bodies. This is simply a piece of 3/8" brass bent at a right angle, with a series of tapered holes drilled in the upright part through which the deer hair is pulled with a piece of thread, and then wound over in a crisscross fashion to hold it in place. The assembled body is then attached to the hook. For a plaything, I know of no other way of putting in a long winter evening without accomplishing a great deal, but if you are actually anxious to tie some flies forget about it until some time when you have time to play.

Many fly tyers use the hackle pliers as a weight to hold the tying silk while adding body material or tinsel. Somehow or other the hackle pliers always seemed to get in my way so I made a thread holder by attaching to a piece of round steel the thickness of a lead pencil a "C" clamp to hold the thread holder to the table. At the other end a rubber lead pencil eraser, the kind that slip over the end of the pencil, is attached. A groove cut in the top of the eraser will hold the thread firmly. This is the best thread holder I have found and by means of the clamp it can be moved as far from the vise as you wish.

Several years ago a dentist friend of mine had the misfortune of having his place catch fire and practically his entire place was destroyed. Many of the tools were not injured by the fire but were of no further use to him due to the action of smoke and acid. In helping him clean up the debris I found a gold mine of tools for the tinkerer. A scalpel used for lancing gums is the best tool I have found for removing the flue from peacock herl for making quill bodies. The tiny steel hook used in the painful operation

of removing the nerve from a cranky tooth keep you close to the outdoors, even though makes a dandy tool for picking out hackles that may have been tied under. It is also useful as a stiletto for drawing down the thread at the head of the fly, and if the bend is removed it is ideal for applying varnish to the heads of small flies.

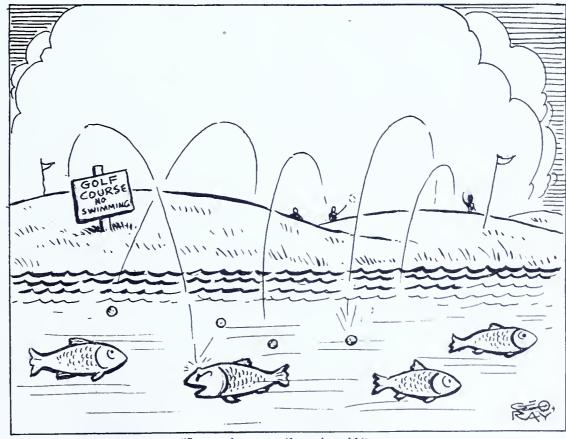
Dental drills come in a wide variety of shapes and sizes and after some use they are discarded by the dentist because they will no longer cut the hard enamel of a tooth, but they will drill through soft metal or wood with ease. These tiny drills are right down the tackle tinker's alley. You will find a myriad of uses for them such as drilling the pins from rod ferrules, repairing plugs, drilling holes in spinners, etc.

By this time I hope to have left the impression with our readers that my hobby shop is quite filled with all sorts of junk for that's exactly as it is, and I suppose that as I see new gadgets they will be added to the ever increasing collection. I feel that it's a place where one can go to relax if he so chooses, amid the surroundings that

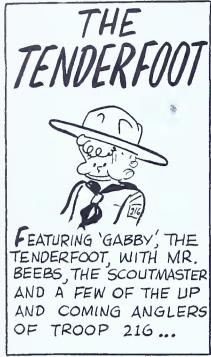
the temperature may be hovering close to the zero mark, or the sleet may be playing a tattoo against the window. You can retreat here to read unmolested, tie a few flies, work at the rods or guns, or just try out some of the crazy notions that fill the mind of the average fishing minded hobbyist.

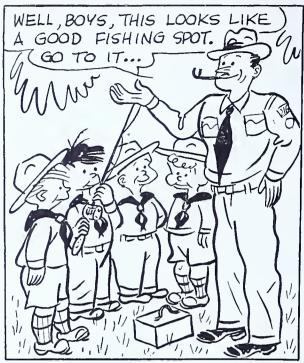
Just one word of admonition. Don't permit any house cleaning lest you spend endless hours hunting for a much needed gray hackle or mallard quill.

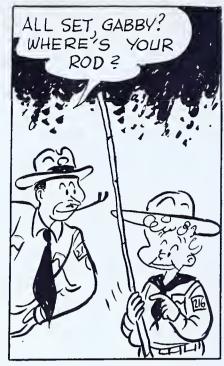




"Scram, boys, another air raid."

















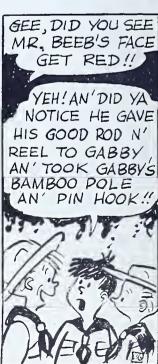












HOW TO CAST A BAIT ROD

(Continued from page 3)

the water the thumb tip very gradually increases pressure on the line until, as the cast loses its momentum, the thumb finally presses down on the revolving spool, thus stopping it. It should be understood that from the very beginning the thumb controls the destiny of the line, and, therefore, the lure. It's a very sensitive proposition and at first you will have trouble. For instance, if you make a cast with more than usual force to it and then attempt to stop the momentum of the spool with the thumb, you will find that thumb pressure on the spool will not accomplish this stoppage—the spool will still revolve. This will result in an overrunning of the line and an inevitable backlash. First, last, and all the time, you must know how much force to put into a cast to take the lure to 30 feet, 40 feet, 50 feet and so on. It is when you put the force of a 50-foot cast into a 30-foot cast that you meet up with trouble. It is because the amateur inevitably seeks to outdo himself in making long casts at the start that he makes a mess of things. He should start off easy in the beginning, making short-distance casts, all the time discovering for himself the part the thumb plays in controlling the line. This business of "thumbing the line" has much to do with successful bait casting and the recommendation would be that a lot of time be expended at the start in learning the importance of it.

There is a method of slowing the momentum of the revolving spool that might be mentioned here, as I believe it has a place in a "how to" article of this sort. As the lure sails through the air on its way to its destination, the eye studies its descent. Shortly before it arches down toward the water the reel, which has been held with handle pointing straight up, is gradually turned to the left so that when the bait hits water the handle is pointing, not straight up, but at an angle to the left. The turning of the reel should be accomplished very gradually, almost imperceptibly. A sudden turning of the reel to the left, before the momentum of the reel has sufficiently slowed down, would cause an overrunning of the line. It is interesting to note that even the slightest turning of the reel to the left will cause the momentum of the spool to be slowed down.

The old saying "practice makes perfect" certainly applies in bait casting as in any other of human endeavor. If you try to overdo and make those long casts without first building up your efficiency by means of short casts, you will defeat your own purpose. Remember, become proficient with the short casts, the actual fishing distances, and then work up to long casts if you desire. Understand, I am not saying that long casts do not occasionally have their value. I do say that where one long cast will be called upon to prove itself, fully a dozen lesser-length casts can be used to even greater advantage.

In the above we have chiefly dealt with the overhead cast. Is this the only cast to be used in bait casting? Some would say that it would answer all one's needs. But does it? Hardly. Which brings up that much-maligned sidecast or "sideswipe" consideration, as it surely does have a place in the bait-casting field, over-head casting enthusiasts and their established notions to the contrary notwithstanding.

Side casters or "sideswipers" have gathered to themselves much ill-will by hooking companions in the head and body generally. A friend of mine had an eye taken right out of his head, impaled on the hook. We have seen men hooked through the nose, ear, and scalp. A few examples of this sort must convince one that sideswipers are dangerous and the method at least half-way open to doubt. Of course there is a clumsy, amateurish way of casting from the side and a more safe way when this is accomplished by a careful fisherman. For instance, most of the hooking of companions occurs in boats. This need not be if the caster stands in the stern and makes his swing off the back of the boat. It is where a fisherman stands in the bow of the boat and casts over the heads of his companions, that the eternal doubt is raised! Therefore, sidecasting is best done by having one man at the oars, and one other person in the boat casting, the sidecast being made off the back of the boat, thus never endangering the oarsman.

I first became conscious of the value of the sidecast when, years ago, I made my initial fishing trips on bass streams in Florida. It was a case of sidecasting much of the time, for trees and branches overhung the waters alongshore. To get up under those branches could not be contrived with that much-publicized over-head cast. My companions were sidecasters; give them a foot space between the foliage and water and they would bounce a bait through the opening and reach shore. Usually on a trip I would come out badly beaten. So I gave some thought to sidecasting and while I will admit I have not entirely solved it, I think I have done fairly well. At that, I think it is hard for a strictly overhead caster to become equally as proficient in the one department as the other.

There are two ways of sidecasting. In one you bring the bait from down at the water in a swing upward, the bait describing a certain moderate arc and so falling to the water. This is little use in getting up under the branches inshore, any more so than the overhead cast. The sidecast that works to advantage is one that carries the rod horizontally off the side, in a line approximately out from the shoulder. Actually it is the overhead cast brought down to the horizontal plane. You can stand erect, head straight up, and cast this way fairly well. Best results, however, are had by bending the body and head to the side, which aids manyfold in assuring accuracy. The position of the reel here might be stressed. It, of course, has its handle pointing down during the whole process of casting, that is, from back to front. A skilled sidecaster can do marvels with this cast. I would say from some little experience that it should entirely be carried on from the stern of the boat, and there should be just the one caster in the boat. To have one casting from the prow, over the heads of the persons in the boat, is unthinkable. Too, I believe that most such casting should be done standing up, although I must confess that I have seen good work along this line carried on by fishermen sitting down.

This sidecast demands much practice casting, more so, by far, than overhead casting, which throws no inconvenience in one's way. A rather good idea is to place a pole about a foot or two over the ground, horizontally, and lean or place branches down to it, then getting away at a likely distance, seek to place the bait through the given space and a certain distance back underneath to the imaginary shore. At first you will hake a botch of things and you may be quite disgusted with your efforts, but after a while, when you get the hang of it, you will accomplish what might seem the impossible. There is a trick you'll get onto sooner or later in this practice, that of hitting the water at the opening under the branches and virtually bouncing the bait off the water and back to its destination. To be a skilled sidecaster you will have to do just that.

When one thinks of the myriad places up around the shores of streams, protected by trees, brush, and overhanging branches, where bass seclude themselves, one really can see where an accurate sidecast, getting into such places, will produce often spectacular results. Whereas, if you can get up to the outer edges only of these protected retreats you may not take a bass in a day of fishing. True, fishing such places is fishing the hard way, but it is just this sort of hazard, and call for accurate casting to circumvent it, that makes for the greatest satisfaction and, often as not, the most fish. There certainly is a place for the sidecast and the bait caster who does not practice up in that especial art is surely missing out on a deadly casting method!

WHILE CIGARETTES BURN

Studies made by the Bureau of Standards concerning the cigarette fire problem show striking facts which will be of interest to every fire warden. The bureau's statistics show that in 1937 a total of 54,000 cigarettes were lighted every second and that these cigarettes were thrown away at an average length of one and one quarter inches and then burn 8.5 to 12 minutes. Six out of nine burn full length.

On a dried grass pad with a wind of three miles per hour, 85.3 per cent of the cigarettes ignited the grass. Average time of ignition, five minutes. On Douglas fir duff in Washington, 20 tests set 19 fires. On rotted Douglas fir wood, 10 tests set five fires, but the relative humidity was above 25 per cent which is the critical point.

The studies by the bureau further showed that cigar butts go out in 2.3 to 5.17 minutes. They do best in a high wind. In a 9 to 12 mile wind, 39.3 per cent set fires in an average time of 2.41 minutes.

With 54,000 cigarettes thrown away every second, and 19 out of 20 of them ready for the beginning of another forest fire if they land in the woods, the forester docs have something to be concerned about.

THE LIEUTENANT GOES BUGGY

(Continued from page 4)

pulling in those bass, then you'll more than bellyache."

"Bass?"

"That's what I said—bass. Where did you think we're going at this unholy hour if not bass fishing?"

"Why didn't you tell me! All I've got is trout tackle."

"So I noticed when I put it in the car. For once I thought you had reformed from your crude fish-hog ways and were willing to join my experiments. Don't tell me that it's all a mistake, that you weren't listening last night."

"How could I, after you said bass fishing is one of the greatest sports? Don't you think I was worried enough over your mental condition without listening to your ravings? What's happened to you, anyway, going bass fishing instead of on our usual trip to the trout stream?"

"I didn't say bass fishing is one of the greatest sports; I said I thought it could be. Certainly it isn't, not the way you fish. But, if it were made a science, I believe it could be a grand sport."

"What do you mean, the way I fish it? What's wrong with that?"

"Listen, Doc, I'll admit you don't use bait like you used to. But look at the coarse tackle and big lures you use! That's no sport, knocking a bass senseless and then dragging it in."

"Now you listen, Lieut., you old fake. The reason you don't use that tackle is because you're too darn lazy. All you want is a whisp of a rod which takes no more effort than a flick of the wrist. You haven't got what it takes when it comes to working a little for your sport."

"You entirely miss the point, my uncouth friend. If it's work, it's not sport. Why tire yourself out, with poor results, when you can enjoy your recreation and get lots better results."

"Explain it, oh wise one—for I don't follow you."

"There's nothing complicated about it. Crude methods require crude tackle. Heavy rods, lines and leaders and big lures. All are clumsy and tire one to a frazzle in no time at all. It takes a week to recover from a day with such equipment. And, what is even more important, your chances of catching bass are as poor as the tackle is crude.

"Why do you suppose everybody begins crabbing about the poor fishing after the first few hours of opening day? Because the big, unnatural junk that is heaved at them has all the bass scared to death. They don't dare come out and feed."

"The fishing is poor because that so-called junk has pretty well caught all the bass."

"Honest, Doc, I never thought you would be one of the common herd always alibiing their lack of fishing knowledge by 'the lake's all fished out.' After all these years in which I've taught you how to take plenty of trout out of supposedly barren streams, I never thought you'd revert to type about bass waters."

"Bass fishing is different and you know it."

"Right there is the difference between you and me. You may 'know it' but I don't. I've got too much respect for the bass to think they are dumb finnies, any more than trout. That has been the trouble with bass fishing, everybody has belittled the intelligence of the fish. And that's why there are so many bass, real ones, in fished-out waters."

"I suppose you are going to show me how to catch them?"

"If my theories are right, I certainly hope to. At least I'm going to show a little respect for what I think is a mighty worthy adversary. That's more than you fellows do."

Doc sighed resignedly and settled down to listen. He knew a lecture was coming, so he might just as well take it and like it, if he could. He had to admit, strictly to himself, of course, that his ultra-scientific fishing side-kick had something on his line. But just how good it was for bass fishing remained to be seen. If it were good, more power to him because Doc loved bass. They've got size, much larger than trout. From his viewpoint, the bigger the better. "I suppose you have it all figured out?"

"I didn't say that—I said I have theories. You never hear me say anything is so before I have proven it to myself. Based on the belief that bass have brains, even if not as many as trout, they should be approached accordingly. The dumbest of fish would be scared by the ordinary bass lures and fishing methods. The only reason any are caught at all is because they get so mad at your insults they have to strike back to keep their self respect.

"There are two ways of fishing in which a real sportsmen should never indulge. One is serving up the fish's favorite live food. Not only does that practice deplete the waters of fish food, due to the enormous amount taken out for bait, then wasted, but using that bait is man's confession that he hasn't enough brains to outwit a fish he considers dumb.

"The other way is similar to catching the fish on their spawning beds where their instincts make them fight any strange object to protect their nests. Making a fish mad, so that he fights, is taking a mean advantage of his weakness. You're not outwitting a fish by such methods. So where is the satisfaction?

"If I'm not clever enough to fool a fish honestly by pitting my craft against his cunning, then I don't deserve to catch him. These days we haven't the right to fish just for meat in the pan. Good heavens, each pound we catch is worth a dozen beefsteaks so far as what we pay for it is concerned. The cost of living would be too high.

"Fishing, as I see it, is an expensive recreation. It must preserve our health and our high regard for ourselves. As a sport, we get the most out of it by playing the game for all it is worth. To me, that means a battle of wits. If something to eat is our goal, for heaven's sake, let's use dynamite—it's cheaper and much more productive of dead fish."

Lieut. lapsed into moody silence. Doc had no answer because he began to see what his friend felt about fishing. In a way, he felt the same, only not to such an extreme. Others, he realized didn't agree as much as he did. Each considered himself a sportsman. But was he? Where is the dividing line between being just a fisherman and a sportsmans angler? Each one has a right to his own opinion, so who's to be the judge? After all, it must simmer down to a way of thinking. Lieut. would have no traffic with those who fished merely to keep fish. They thought him more or less buggy.

Lieut. was talking again. "When you play golf, your thrill comes in developing your skill, in what you can show on the score card. Do you have to eat that card? Yet, to be able to make that score, you pay plenty, same as for fishing. And look at the millions who play the game! Paying a big green fee is part of the game—no one kicks. It takes money to keep the fairways and greens in shape.

"Then look at the millions who fish. They, too, pay all kinds of money for



equipment. But when it comes to paying a green fee, the cost of upkeep for the course they play, do they also consider that a part of the game? Not on your life, they don't. And they want, in addition, to take part of the course home with them. Fish are like the divots and cups—the more you take away, the less course and sport you have left. In golf you replace the divots—why not do the same when fishing?"

"Aren't you stretching a point, comparing fish to divots?"

"Not from the standpoint of principle. The more you replace, the better fun the next time you play. A pound trout returned to a pool means more real sport. In a pan, he is no more valuable than any fish you can buy for a quarter. He cost many times that to produce and catch."

The Lieutenant swung the car onto a dirt road and soon pulled up along the shore of a lake. Doc was surprised.

"You don't mean to fish here, do you, Lieut.?"

"Certainly, why not?"

"Why—it's fished to death. There just aren't any bass here. Even on opening day only one little baby one was caught."

"That's what I want. If I can catch bass here, then you've got to admit my theory is based on sound facts. To prove anything, you've got to give it the hardest kind of tests. Otherwise it might work accidentally without being any good."

"What in tarnation is this theory you're raving so much about?"

"I told you last night—give the bass credit for having some brains. Treat them with the same respect we give trout and salmon. Instead of playing on their emotions, outwit them."

As he talked, Lieut. unlocked the trunk of the car and started passing out the tackle. There was none of the usual heavy bass equipment, only his trout outfit. And there was no boat in sight. Doc was mystified.

"What are you going to do, fish from the shore?"

"Part of the time, when I can. At others I expect to wade. You don't think I'm going to barge up in a boat unless I have to, do you? Any worthwhile bass knows what a boat means, so why handicap oneself? If I approach them the same as I do a trout, I'll stand a better chance of fooling them.

"Casting from the bank is best. Why? Because any bug or animal which falls into the water usually heads for shore. Pulling your lure the other way makes it act unnatural. That's why, from a boat, twitching a surface lure rather than pulling it out, is usually much more effective."

"Speaking of lures, what kind do you intend to use on that trout rod?"

"Listen, Doc, do you remember the kind of lures those fellows down Harrisburg way are using? Small ones. But even they are too big for what I have in mind. Bass food, or the great bulk of it, anyway, doesn't grow that big. With few exceptions, the minnows, insects and all other live things are very small at this time of year. When trout fishing, we take that into consideration. Why not with bass? See what I'm driving at?"

While Doc mulled the idea over in his mind, Lieut. tied a very small hair bug on his 9-ft. trout leader tapered to 2X. The bug was tied on a No. 10 hook, so that it was

no larger than a small bumblebee. In fact, it looked like the ones which were busy in the blossoms along the shore.

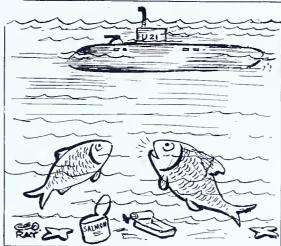
"You're crazy, Lieut., you can't land a bass on that fine leader. The weeds will ruin it"

"I didn't come here to land bass, I came to prove a theory. And to prove, also, that there are plenty of bass in this fished out lake. I'll admit my tackle is extreme—if I wanted to land the bass, I'd modify it a little."

Doc didn't even rig up his tackle. By now he was as interested in the results as Lieut., who, after dipping the bug in fly oil and shaking it dry, carefully walked near a spot where he could cast from the bank.

The scientist handled the lure like a trout fly. He false cast, lengthening his line, until he could lightly drop the bug near a flowering pickerel weed. The bug, leader and line all floated as it lay quietly for at least 10 seconds. Suddenly it twitched, sending out small ripples as Lieut. deftly worked the end of the rod. The leader also sent out waves, so Lieut. retrieved his east, scowling.

"I should have known better," he grumbled to himself as he reached in his pocket. Taking out a small tube of toothpaste, he carefully rubbed a tiny amount of paste over



"Look! They're starting to put men up in cans now."

the half of the leader nearest the bug. Picking out another spot, he cast again. This time the end of the leader sank and only the bug seemed to twitch at long intervals.

About 20 minutes went by as Lieut. patiently cast. Doc was becoming disappointed. He actually was rooting for his friend. Not entirely without selfish reasons because any new way to catch a bass was welcome.

The bug had stopped wiggling near a patch of weeds when a dark shadow beneath it rose slowly, a dimple appeared where the bug had been, and that was all. The Lieutenant set up quickly on his rod and the surface of the water exploded as a big bass burst forth, stood on his tail and shook as he opened his mouth. The bug flew up and away.

"Wowie, what a baby!" exclaimed Doc. "Too bad your hook's too small to hold him."

Lieut. was beaming all over. "Hook? I haven't any on the bug. Think I want to lose the bug and my leader too? I can fight the bass so long as he keeps his mouth shut and holds onto the bug. In that way he doesn't get hurt and I keep my lure."

Do you mean to say that you don't want to even hook a bass, that you're only proving

they are here and that you could catch them by this theory of yours?"

"At last, Doc, you have seen the light. I don't want these fish, all I want to know is that they are here in these so-called fished-out waters and that they do have brains but that I can outwit them. In a nutshell, that's what makes a sport of fishing. If I need a bass to eat, it would be a simple matter to put on a hook. Without a hook, I can east where I please and not get caught on the weeds. Thus I can explore this water thoroughly.

"Think what that means. If I do that, I will know where each fish feeds. Later, I could come back, fish only those spots, using a hook, and really concentrate over bass. My chances would be greatly increased. I don't know why fishermen are so impatient that they won't use their heads. Over a period of days, my method would result in many times the fish actually caught. For that reason, I have no intention of passing the word along."

Doc stood silent. For once he thought Lieut. had really proven his theory. This belief increased as, during the next two hours, at least 10 more bass, as well as scores of other fish, rose from various odd spots among the weeds to suck in, hit or scoop in the small bug. It began to seem as though the lake were alive with real he-man-sized

Part of the time Lieut cast from the shore, the rest he spent carefully wading to put himself in the best position to cast to the tiny openings in the weeds or along the open edges.

A stubborn old bass that would weigh between 4 and 5 pounds sucked in the harmless bug outside a weed bed and headed for the deeper, open water. He had clamped his mouth shut on the bug and had no intention of letting it go. Lieut's rod was bent to the limit as he strove to stop the charge and make the bass jump. For a couple of minutes the battle see-sawed back and forth. At last the bass came up in a flying leap, somersaulted in the air, shaking his body in fury. Before hitting the water in a perfect dive, he opened his mouth as though to give a battle-cry. The bug rebounded toward Lieut. as the taut line was released.

The Lieutenant gave a deep sigh of satisfaction and reeled in his line. Wading to shore, he grinned at Doc.

"Well, let's go fishing."

Whereupon he put away his tackle and headed the car toward his traditional rendez-vous with the trout.

TAKES TAGGED TROUT

A 20½ inch tagged lake trout taken recently in Lake Superior by James McDonald, Grand Marais, Michigan, commercial fisherman, was one of 700 hatchery-reared lake trout released in Munising Bay on May 13, 1941, according to records of the Michigan Conservation Department's institute for fisheries research. At time of tagging, the fish was 10¾ inches long and weighed about four pounds. It had traveled about 75 miles in a northeasterly direction since its release three years ago.

Reprinted from The Fisherman.

BUY BONDS

THE SHRINKING OUTDOOR FRONT

(Continued from page 8)

fish law violators into sportsmen? Is there something smelly about administration of the migatory bird law, and if there is what steps can be taken to root out commercialism and clean up the wildfowl flyways? Will it be necessary to insist on a truth-in-advertising policy for resort owners? Must extraordinary measures be taken to eliminate stream and lake pollution? Should curbs be put on commercial airplane jaunts to secluded lakes?

I'm not attempting to answer these questions, but merely to hint at the scope of the job in which everyone interested in the future of America must participate. Some returning service men will have a great deal to say about it.

The outdoor front is shrinking not only because of easy and speedy transportation facilities and the increasing number of hunters, fishermen and other out-of-doors people. Unless immediate attention is given by state and national conservation agencies to areas where timber cutting has been heavy we are going to see multiplied the sorry conditions created by careless Paul Bunyans of the past, who swept through our forests like devastating flame. We are facing not only a wood shortage but the score of evils always attendant upon forest denudation. Clear cutting of timber and erosion go hand in hand, and between the two mounts stupendous economic loss. Certain woods and dimension materials—walnut for gunstocks, Sitka spruce for airplane lumber, yellow birch, tulip poplar, structural timbers of most species, and long, wide timbers free from knots and other defects are increasingly difficult to obtain in needed quantities, the Forest Service warns.

Only the other day a nostalgic old timer was telling me about an eastern trout brook

he had fished as a youth.

"It was a spring-fed stream flowing down a wooded hillside", he recalled, "and I could catch a mess of natives there any time. I saw it again a year ago and the brook bed was dry as tinder. There were plenty of signs, though, that in flood time it became a regular torrent. It had washed deep gullies through an abandoned farm. They'd cut off all the trees and the springs had disappeared. Now that dry brook is helping others like itself wash away soil during time of heavy rainfall. Probably that had something to do with the farm being abandoned."

That particular instance of topsoil stripping encouraged by the axeman began long years ago, but there's no doubt that excessive cutting of timber for war uses, some of it perhaps justified by the emergency, is in process of eliminating streams or minimizing their flow, thereby reducing fishing areas. What's even more deplorable, it has started erosion that will make many acres barren of agricultural crops and timber for years to comeforever if something isn't done about it.

Some states have made notable advances along conservation lines during recent years and already have anticipated the additional strain that will be placed upon them with the end of the war. Pennsylvania, long regarded as a model of wildlife and conservation procedure, has worked wonders in putting farmer-sportsman relations on a friendly basis, and has carried on a comprehensive fish and game program in the face of wartime exigencies. Both the board of fish commissioners and the game commission-they're separate departments in the Keystone State-are pretty well prepared to greet the service man with the sort of outdoor programs he is justified in expecting. Ohio authorities and those of some other states also consult and cooperate with sportsmen and farmers to the mutual advantage of everyone concerned, a policy that might well be imitated by commonwealths that are still in the conservation doldrums.

Perhaps you're convinced that as an individual you can't do much about the multitude of conservation and wildlife problems that will trail the heels of peace, but it's upon the individual, working alone and through organizations, that the outdoor future depends. Eternal vigilance and ceaseless endeavor will be the price of an ever green United States.

THE ANGLER'S NOTEBOOK

By DICK FORTNEY

Excerpt from a recent letter of Edward Carroll, Electricians Mate, Second Class, Ketchikan, Alaska:

"The salmon will start running pretty soon. As soon as they start I am going trolling, but I would rather go fishing in a little creek in Pennsylvania and catch a 6 inch trout. Gee, won't it be swell if the State makes all those lakes-105 of them, that sure is a lot."

Don't be ashamed of your own favorite way of fishing, no matter what it is. Any method of fishing is worthwhile, so long as it is legal and sporting. The purist who uses only dry flies, for example, misses a lot of fun if he never tries still fishing for suckers or worm fishing for trout or angling with a bobber.

An item printed before in this column is worth repeating-Tie bait hooks directly to the end of the leader, instead of using snelled hooks. For one thing, a hook tied on the leader is safer (snelled hooks deteriorate and rot), and equally important is the fact that an undersized fish can easily be released by snipping off the hook.

Worms are the No. 1 bait for brook trout.

The most useful size in wet flies is 12, although 16s or 18s may be necessary under low, clear water conditions. Size 6 is the general choice for streamers.

In attaching split shot to a bait rig, begin with two or three and use only enough to get the bait down to the desired depth in the water. Be careful, also, that the number of shot used is not great enough to interfere with free movement of the bait in the cur-

Get live bait down deep, and don't worry if it gets snagged occasionally. Work it free carefully, and don't be surprised if a fish smacks it just at the moment it is released. The deep fishing strategy is based on the fact that fish are extremely difficult to catch with bait when they are feeding near or on the surface.

BAIT CASTING FOR WALLEYES

(Continued from page 9)

Fish over five pounds are not a scarce article to the plug fisherman. Such a fish may strike viciously but more frequently he follows the lure then deliberately clamps his big vicious jaws around it. The fisherman feels no strike but suddenly realizes that 'a fish is on." Under such a circumstance the fisherman should strike back to set the hooks over the barbs.

The fight is not spectacular but still this fish packs power. Instead of coming to the top as is the custom of a bass he bores right into the depths and holds his ground with the tenacity of a bulldog.

Frequently we hear of a fisherman smashing his tackle on a fish which "could not be moved off the bottom." We think we have

the answer to this one.

On one occasion we hooked a good fish, about twenty five inches in length, at the head of a deep ledge hole. The lower Susquehanna was about as clear and low as it ever becomes and the sunlight struck the water in such a way that every movement of the fish was clearly discernible. It first spread its gills and shook its head. Then it moved toward the faster water and remained stationary. About a minute of this action must have been discouraging to the fish for it deliberately swam to a slanting rock and stuck its head under this shelter in strict ostrich fashion.

This, we believe, is what hooked walleyes commonly do, and of course under such a circumstance they cannot be "moved from the bottom." The main thing in playing a walleye is to take plenty of time and avoid the straining of tackle. Sooner or later he will start cruising around again. Once he comes to the surface he is well neigh spent and just about ready to be netted or beached.

Angling is at its best for this fish at a low water stage and in the fall. When the water is low they are concentrated in the deepest of holes and in the fall of the year they are voracious feeders. The combination of these two conditions is ideal.

The walleye is a valuable asset our waters and he is on the increase. It is fair to assume that as our streams improve in condition due to the elaborate State stream purification program we will see more and more of him. He suffered more than any other warm water fish from poisoned water, but he is staging his comeback and better days lie ahead.

THE ANGLER'S NOTEBOOK

(Continued)

Spring trout feed deep not only because of water conditions, but also because they like to feast on the nymphs and larvae of aquatic insects, helgramites, and other water bugs which develop at this season of the year.

Fishing in fast water with bait is a problem for many anglers, yet the solution is simple. Face upstream, cast up ahead of you as far as possible, then handle the line so as to permit the bait to sink down into the water as it floats toward you. Keep the line just tight enough to be able to set the hook on a

(Continued on page 20)

THE BIOLOGY OF THE MAY FLY

(Continued from page 5)

animal and two claspers which are present in the male but absent in the female.

Respiration

The nymphs breathe by means of tracheal gills and they differ in this respect from the adults that breathe through spiracles. The tracheal gills in the larva or nymph are located along the sides and on the back of the abdomen and six or seven pairs are present. The larva are conspicuous in the water because of these gills which are in constant motion. The gills move regularly, distinctly, and incessantly and vigorously; exercise increases their motion. They are made up of a plate or lamina and a bunch of respiratory filaments. The structure varies in different species and is modified according to the dwelling place of the larva. Those larvae inhabiting mud and sand have a reduced number of gills which are protected by spinous extensions from the body. The extensions protect the gills from friction when the animal moves through mud or sand.

The nymphs differ strikingly from the adults in size, color, eyes, antennae, and tails. The eyes are faceted in the adults although they are smooth in the larva.

In preparation for the sub-imago stage, which is the first winged stage that is assumed on leaving the water, the nymphs cease to eat and they empty the alimentary canal. The wings and reproductive organs are greatly developed at this stage and when they are ready to leave the H2O the tracheal gills are cast completely leaving only small rudiments on the sides of the abdomen.

There is no set time for the nymphs to emerge from the water. It may be anywhere from afternoon to late evening; the time varying with different species. usually emerge at the hotest part of the season beginning at the end of May and the beginning of June, but belated transformations trail along into comparatively cool weather. They have been seen emerging from April until October.

When about to emerge the nymph floats to the surface of the water; a fissure appears in the dorsal cuticle and the winged insect issues and flies away. The insect issues very quickly from its cuticle.

Characteristics of the Sub-Imago

- 1. Dull appearance.
- 2. Wings translucent—usually margined by prominent fringes of hairs.
- 3. Of variable duration—there is a correspondence between the time spent in this stage and the duration of the imago.
- 4. Body form of the sub-imago differs little from the adult.
- 5. Very inactive—the sub-imago spends its time resting in the shade. The fore legs become elongated and the reproductive system matures. (This stage may correspond to the pupa stage of insects that have a complete metamorphosis.)

Imago or Mature Adult

The full formed Imago or adult develops from the sub-imago when it sheds its cuticle. However, some sub-imagoes do not shed their entire cuticle and some short lined species do not shed it at all.

The structure of the full formed imago is essentially the same as that of the subimago except that it possesses:

- 1. A shiny appearance.
- 2. Full coloration.
- 3. Transparent wings.
- 4. Eyes and legs that have attained complete development.

It is interesting to know that the adult May-fly differs from the nymph in its method of breathing. It gets air into its body by means of spiracles of which there are ten pairs. Two pairs of the spiracles are thoracic and eight pairs are abdominal in posi-

Structure of the Adult May-Fly

Antennae very short.

Compound eyes-largest in males. In some species the upper portions have larger facets than the lower portions.

Simple eyes-the three acelli or simple eyes are between the compound eyes.



Hayes T. Englert, Game Commission Division Supervisor, writes: After about 3,999 casts with a plug I hooked into one of those fine upper Allegheny muskies.

Mouth parts—the mouth parts of the adult are degenerate; they begin degenerating during the late nymph stage. In some species the mouth parts have atrophied to such an extent that they are scarcely recognizable. It has often been said that the adults lack mouth parts but this is not true, however, they often appear in a very weak form.

The thorax of the adult is similar to that of the nymph. That is, the middle segment (mesothorax) is large and the prothorax and metathorax are small.

The wings of the adult are largest in the female. They are triangular in shape, very fragile, and the hind wings are much smaller than the fore wings. In some species the hind wings may be atrophied to a very considerable extent.

The legs in the adult are not used for walking. The fore legs of the male are very long and are for the purpose of aiding the male grasp the female during capulation; the middle and hind legs are much smaller in size.

The abdomen of both sexes is segmented and in the male there is present a pair of 3 jointed clasping organs which also aid in grasping the female during capulation. A pair of tail filaments are present in both sexes and those of the female are about 1/3 shorter than those of the male.

Internal Anatomy of the Adult

The most characteristic feature of the internal organs of the adult is the modification of the alimentary canal for the aerostatic purposes. This region no longer functions as the digestive tract but has assumed a new role and has undergone structural changes in consequence.

The aesophagus is wide in the nymph but in the imago (adult) it becomes an extremely narrow tube and there is formed a complicated apparatus of dilator muscles which is for the purpose of regulating the air content of the gut. The air is taken in or expelled through the mouth and the stomach is modified into a kind of storage balloon. The first portion of the hind intestine is modified to form a domplex value which prevents the escape of air from the stomach.

Reproduction

When the eggs of the female are fertilized she deposits them in the water and as soon as the eggs are laid the animal dies. The eggs are intended to be laid in the water of the habitat but the females deposit them on any object with which they come in contact. The short life of the female compels her to deposit her 700 or 800 eggs at once and she does it without discrimination. When about to deposit her eggs, the female turns up the extremity of her abdomen and the arfices of the two oviducts which open behind the sixth abdominal segment are exposed. Two chesters of eggs are passed from these arfices at the same time and air vessicles project afterwards. They probably aid in the expulsion of the egg masses.

When the eggs are laid they are in a viscid like fluid which is soluble in H2O and they soon come apart and rest on the bottom because the specific gravity of the eggs is higher than that of H_2O .

Structure of the Eggs

None of the smaller orders of insects present so many variations of form and structure in regard to their eggs as do the Mayflies. The differences among the eggs involved, namely:

- 1. Variations in color and shape. The colors are white, yellow, and brownish and the shapes are oval, elongate ovoid and dumbbell shape.
- 2. Special anchoring filaments. Some have threads, others have two small knobs.

In the Heptagenia the eggs are oval and there is a skein of bright yellow thread at each pole. When the eggs come in contact with the H2O the skeins unroll and the threads serve as anchors to keep the eggs out of the mud. In Ephemerella rotunda each knob is attached to the destal end of a thread like extension of the chorion. This thread is tightly coiled like a watch spring and when in contact with the H₂O it springs out. The little knobs probably act as anchors.

(Continued on next page)

THE BIOLOGY OF THE MAY FLY

(Continued from page 17)

3. Chorionic Sculpturing.

In some eggs the chorion (shell) is rough and serves to anchor the egg. Some eggs are elongate-ovoid in shape and are thinly covered with short hairs so that they look like ciliated one celled animals.

Food of the May-Fly

The May-flies feed only while in the nymph stage. They do not feed in the adult stage because their entire digestive system is altered. It appears that the lessening of specific gravity in order to facilitate the mating flight is more important than taking in food so as to be able to live longer.

The nymphs live mostly on a vegetable diet and algae and fragments of plant tissues. Animal food is not taken unless the nymphs are well starved and then they will chew at almost anything with which they come in contact.

The mouth parts of the nymphs are specially adapted for getting their food and

the most specialized mouth parts are those that are adapted for rakers. Rakes are extended forward and backward and the foot is pulled into the mouth for grinding.

May-Flies as Food for Others

The May-fly nymphs and adults are choice foods for fishes. The adults are eagerly devoured when they are on the wing and the "duns," "spinners," and "drakes" with which most of our fly fishermen are familiar are made to represent various species of May-flies and are used when the latter are on the wing.

The larva and adult May-flies are harmless and inoffensive and the female is the larger of the two because of the eggs in its body, however, these harmless insects sometimes become nuisances because they breed in very great numbers. In certain parts of Europe the people refer to the May-flies as they do to a fall of snow. "There was quite a fall of May-flies last evening." In the United States there have been cases where May-flies hatched out in such great num-

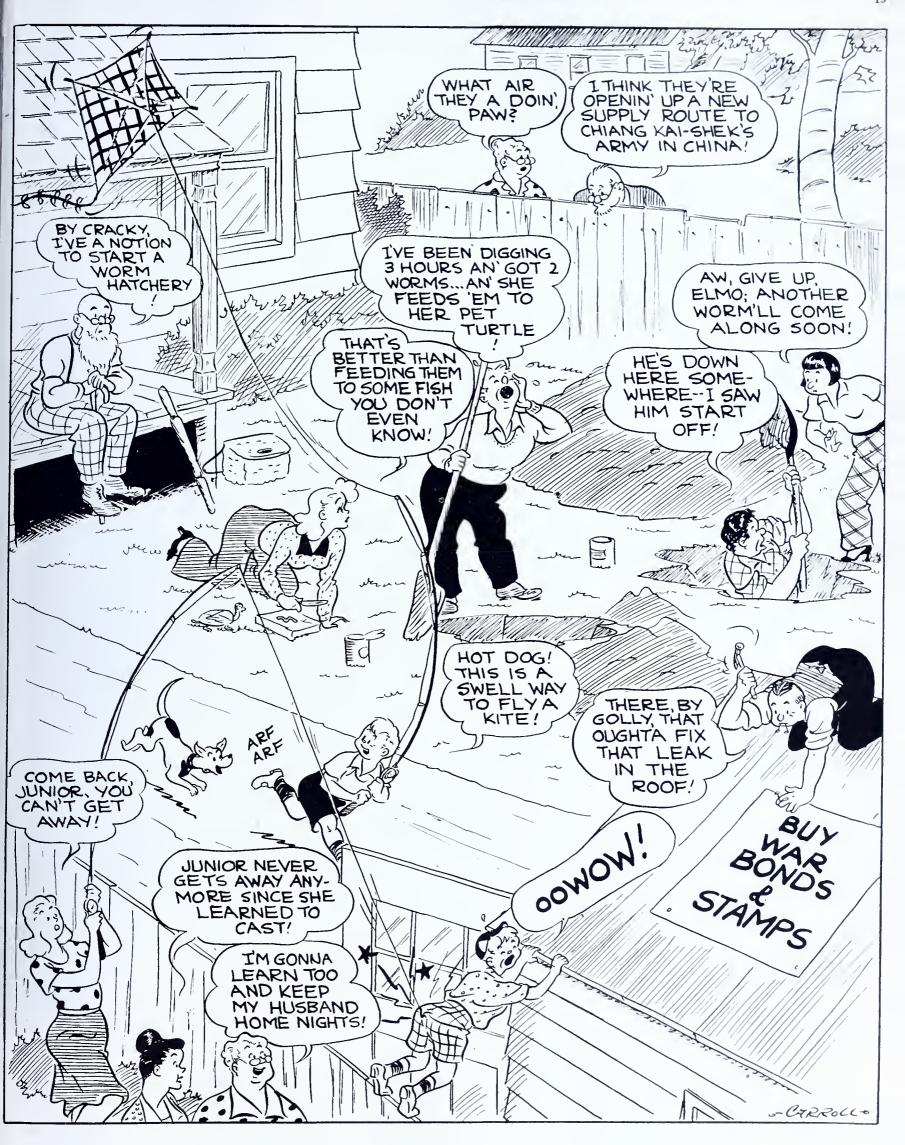
bers that the bodies after they had died had clogged up the rigging of river steamers and they have also been found in heaps 18 inches deep and 15 and 20 feet in diameter. They are greatly attracted to lights and in towns bordering some of our rivers and lakes, the citizens are compelled to turn off all the lights in order not to attract the flies

The question might arise in your mind, "Why are so many adults produced?" This question can be answered easily if you think for a moment about the length of time the adult May-fly lives. The chances of a male coming in contact with a female so that fertilization might take place the chances of the female depositing her eggs in the proper place, and the eggs developing into adults are so slim that if it were not for the millions of adults that are produced this order of insects might become extinct.

BUY BONDS



Roy Wheeler and R. W. Rea, two great boosters of the Harrisburg Hunters' and Anglers' Association, enjoyed a great midseason day on the Yellow Breeches Creek. Pictured above are a 23 inch 4 lb. 2 oz. brown and a 20 inch 3 lb. 9 oz. fish. The smaller ones in the catch were returned uninjured.



THE MAN ACROSS THE STREET

I never knew the fellow, Who lived across the street, We both lived there for quite a spell Before we chanced to meet.

Just like a lot of other folks, Too busy to be friends, Too busy watching politics, And world financial trends.

All filled up with office work, Great rush and worldly woe, You'd thought without my brilliant mind, The world just couldn't go.

Until I saw this neighbor, Across the narrow way, Dustin' off some bamboo poles, In a sort of yearning way.

Now I hadn't seen a bamboo pole, Since I was a barefoot boy, And the memories that it brought to me, Just filled my heart with joy.

So I casually went across the street, With a sort of lingering wish, And I says, "Howdy friend Did you used to like to fish?"

"Did I?", he says, "I just was thinkin'
I'd like to go again,
But I'm all tied up with work and things,
Just like all other men."

Well before we got through talking, We had planned some fishing fun, And from that moment onward, Our friendship sure begun.

We found that life's a heap more fun, If you're outdoors for a while, And you get a feeling deep inside, That you'd always like to smile.

That's my neighbor across the street, We're buddies, don't you see? Cause fishin' made us human, Like we really ought to be.

By PAUL T. GILBERT.

—Reprinted from Outdoor Georgia.

The Horny Chub

Some folks fish for bass or trout, Or some such fancy fish, With bug or fly they ply the stream And never fill the dish.

But, as for me, when I go out To fish for bass and trout, Sometimes come home when day is done With the common Horned Pout.

One fish I recommend for fishing dubs Such as the average you and I, Is the Horny Chub, the fish for fishing dubs That is looking for fish to fry.

Why he bites on snails or copper nails On fly or worm or grub So, here's to that prize for fishing dubs, The common Horny Chub!

M. G. ROBB.

Part II Of Angler's Field Book By Edson Leonard

THE ANGLER'S FIELD BOOK GINGER QUILL-DUN

Order: "Ephemeroptere" Scientific name: "Stenonema Fuscum"

Derivation of name:
Ephemeros—Lasting but a day

Nymph: Body—brownish, black banded, underside yellowish Legs—brownish, black markings at joints. Tails—brown.

Sub-Imago (dun): Wings-grayish-brown.

Body-deep amber, light amber ribbed.

Legs—amber. Tails—amber.

The Ginger Quill is one of the most common insects known to streams and upland regions; it is needless to say that its abundance and hardihood have made it well known to all manner of fly-fishermen. It is often true that some anglers do not have a great knowledge of the insects abounding in their favorite haunts, but it is a certainty that those who do not recognize the Ginger Quill are few. Too, the Trout are especially aware of these dependable little insects and many of the finest catches of the year are taken with one of the several representations of the various phases of its life-span.

The nymph is easily recognized. Generally there are several on the bottom surfaces of every good sized rock in the stream. When disturbed at the hands of an inquiring angler, they scurry in all directions seeking any available cracks or means of protection which the overturned rock might provide. It is at this time that the angler can readily identify the distinguishing marks of amber and brown. The tails are quite long, and the body appears to be short but wide in comparison, as well as being compressed. Naturally closely imitative artificials are superb when fished in the deeper stratas of the stream.

The air-minded Dun is a pretty creature and the chances of taking good trout with its imitation are always excellent—even during periods when the natural hatches have long since been terminated for the season. Although the Dun does not exist long in this stage, actually, as a rule spending one day or two at the most in some nearby foliage or brush, the Trout feed with unparalleled appetite throughout the short period. Dry fly fishing during the first warmer hours of the day is most apt to be the best method for approach.

The wet-fly style of the Ginger Quill is one of my preferred flies and its versatility is above question. Many times when there is absolutely no movement or indication of feeding the Ginger Quill wet-fly will induce strikes from good fish. In this instance the fly should be cast upstream but not too far below the surface. Size 14 is ideal for warm weather casting and the longer and finer the leader the better the ultimate results.

Construct this imitation (all phases) with sparseness as the keynote. It is a slim and definitely marked fly and overdressing will destroy the illusionary values to the fish.

Outstanding of the Ginger Quill Nymph is its compressed body which facilitates deflection of water currents for quick movement. Correspondingly it lives in water such as riffles and runs, etc. Another characteristic is the lack of self-made shelters such as constructed by other aquatic insects. Seemingly this type depends on agility alone and possibly the smaller size being less conspicuous to evade the ever-reaching Trout. Too, the Ginger Quill can produce several times in one season under conditions conducive to unrestricted activity.

The Dun is the result of the transition from nymph to adult (first flying form). At the surface the nymph sheds its skin and emerges as a full-fledged struggling insect. It is during this molt at the surface that the Trout become bold in their feeding; as has been remarked previously, this condition takes place in the first warm hours of the morning—a result of the sun's radiation of the water.

The Dun does not remain in this form for long, because during its period of quiescence, it ages into the final evolution, the Spinner.

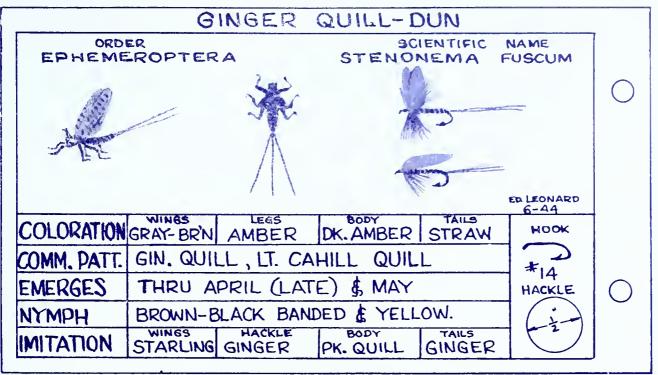
THE ANGLER'S NOTEBOOK

(Continued from page 16)

There is no more dangerous fishing tool than a dull knife. A sharp knife is handled with respect and does a neat, workmanlike job. A dull knife botches up the chores it is called upon to perform, and besides it betrays the user into carelessness which may result in an ugly and serious wound.

Concentrate on the brook trout, and on the baits and flies that he likes, early in the season. It is a fact that the brookie will feed in water so cold that other species of trout are lethargic and uninterested.

Use one worm at a time—about three inches is the ideal length for garden hackle—and be sure that the worm has had a chance to scour itself in clean moss. Hook the worm lightly, letting plenty of its length free to wriggle, and never use any but fresh bait.



GINGER QUILL-DUN											
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GINGER

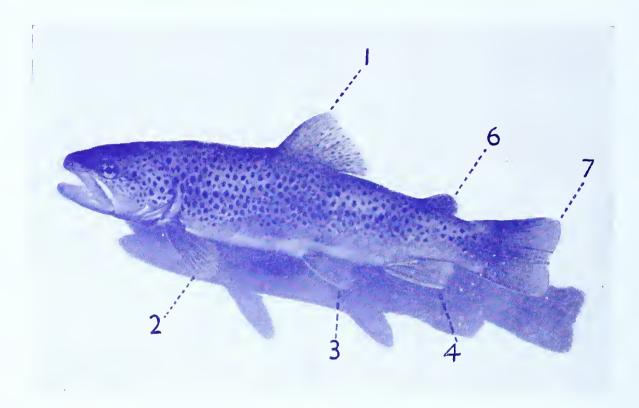
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GINGER

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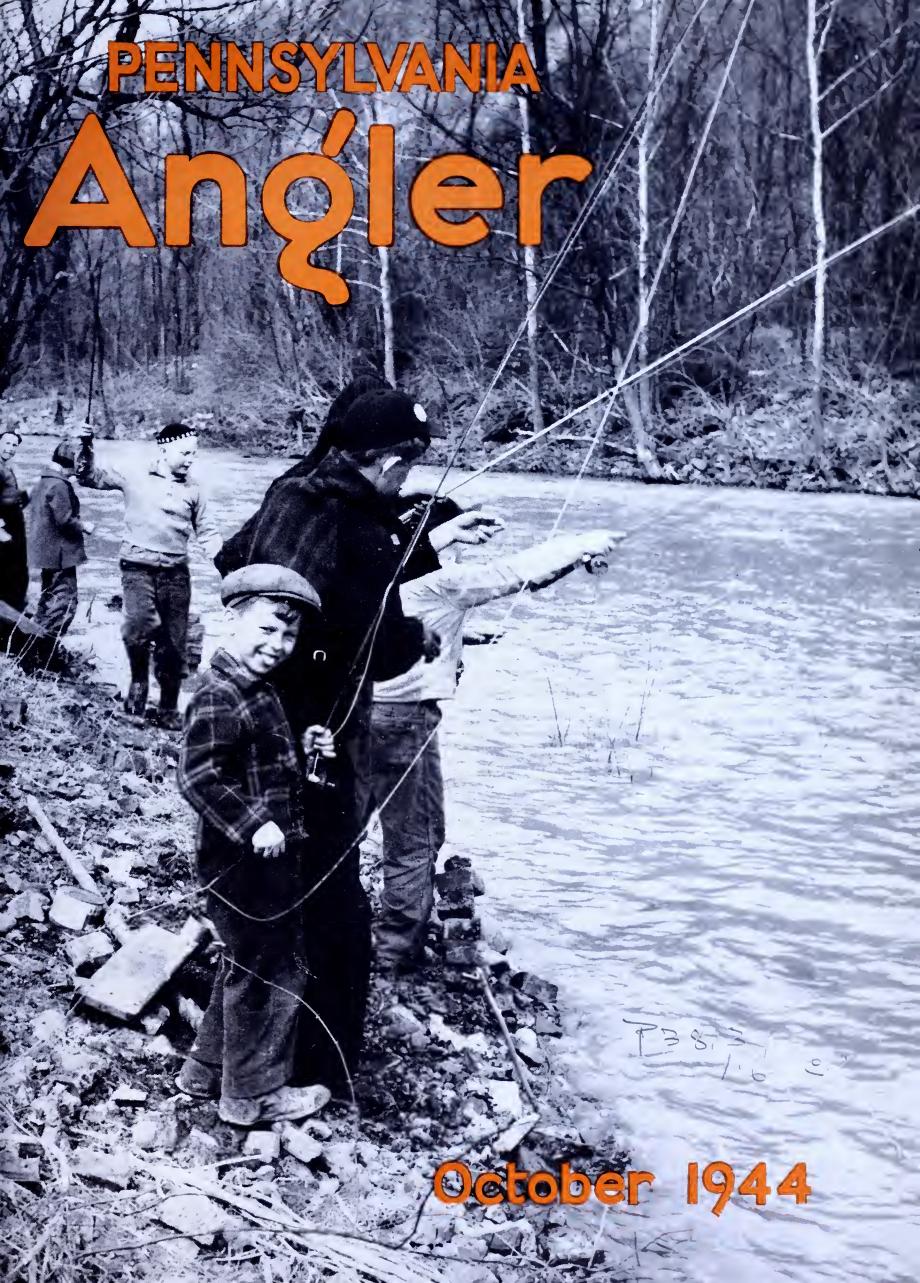
Back the Attack--Buy War Bonds





THE NAME OF THE FINS ON A TROUT

- 1. Dorsal Fin
- 2. Pectoral Fins
- 3. Ventral Fins
- 4. Anal Fin
- 6. Adipose Fin
- 7. Candal Fin, or Tail





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IMPORTANT—The Editor should be notified immediately of change in subscriber's address.

Please give old and new addresses.



Frontispiece

REMEMBER!

Sucker Fishermen on Fishing Creek below dam near Mill Hall, Pa.

Photo by-G. L. RISHEL,

Lockhaven, Pa.

In This Issue:

A Trout Stream Within a Great City

By Edgar W. Nicholson Member Penna. Fish Comm.

Fishermen! How About Taking A Wounded Soldier on Your Trip?

By Johnny Mock

The Nameless

By Dick Fortney

It's Fun! Helping to Stock Pennsylvania Streams

(Pictorial)

Highlights From the Bass and Salmon Waters

(Fish Wardens Report the Catch)

Fishing Battlefronts

Club Activities

What the Sportscasters Are Saying

Fish Commission Honor Roll

COME IN FISHERMEN! LET'S HEAR YOUR STORY

You fishermen out there over Pennsylvania, all of you, have an experience to relate. You have a story to tell for which fishermen everywhere in Pennsylvania are waiting to hear. It may be about 'that big one that got away down by the 'ole sunken log' last Spring or that trip with dad long ago. Maybe a good yarn narrating the annual fishing expedition of 'the bunch' into the dark recesses of your favorite fishing waters but no matter what the incident, you do have some stories to tell.

The Pennsylvania Angler is your magazine! It's your monthly medium for the exchange of ideas and thoughts and experiences and we invite you to COME IN fisherman.

Brevity is the essence of interest so keep them short. Stick to the truth and write in your own language. Photos are fine!

Double space your manuscript (typewritten if possible), avoid all description where possible and relate the story just as it happened. All articles will appear in The Angler at our first opportunity and must be considered a free contribution on your part.

COME IN fishermen! Let us relate your story for which fishermen everywhere are waiting to hear.

PICTURES? YOU BET!

This is Your Chance to Get You and Your Friends in THE ANGLER'S Picture Parade

WHO KNOWS! You may be on the COVER of the ANGLER next month!

So—get that 'ole camera in action and let's see what kind of pictures you can really make. Pictures of fishing trips, camping, ideal water landscapes of favorite spots which have been the mecca for fishermen down through the years.

It has been said—"Pictures is the only language all mankind can understand"—and what an understanding language this means among fishermen. The Angler wants your photographs. Other fishermen anxiously await to see and understand you better. All photos furnished the editorial staff of The Angler will be carefully examined and selected for publication each month.

Then too! WHO KNOWS! Your contribution may be selected and be used $a_{\rm S}$ the outside front cover of The Angler itself.

Be diligent! Be critical in your selection! Get good shots! Submit clean clear prints! Above all—Name the Site, Location and Persons, if any.

(All photos submitted become the property of The Angler.)

A TROUT STREAM WITHIN A GREAT CITY

By EDGAR W. NICHOLSON

Member-Pennsylvania Fish Commission

Fairmount Park in Philadelphia affords opportunity for all kinds of recreation and sports activities, among which are very good fishing, both for the youngsters and for the most expert fly fishermen for trout.

For the past fifteen years the boys and girls of the big city are advised, through the newspapers, that the State Fish Commissioners have again stocked their lake with "Sunnies," "Catties" and Carp, that their season will open on the following Saturday morning, for boys and girls under sixteen who may fish without State license. By seven o'clock on that day the kids are coming from all directions to try for the prizes offered by the Penna. State Fish & Game Protective Assn.

To see the tackle these youngsters bring is an education for the older fishermen, it may be that the better looking rods are there without Dad's permission, but no matter, a sea rod may be the means of landing a nice "sunnie" for a proud youngster. Numerous cans of worms, big balls of dough for the carp fishermen are everywhere. The number of kids fishing varies from year to year, from one hundred to three hundred, all having the time of their lives. Many mothers and a few of their fathers make up an interested party. The remarkable thing is that so far there has never been a scrap, rather unusual when so many kids get together, each one seems to be intent upon his job for the day.

The lake, Concourse Lake, is a shallow one, so there is no real danger if a boy falls in, this lake is used later in the summer for model yacht racing and in winter for ice skating, all danger of accident is nil. We believe we are starting these children off in the cleanest sport known, which they will never forget.

The trout fishing, which one would assume to be impossible within a city of two million people, is on Wissahickon Creek, within the Fairmount Park area. It is a beautiful stream flowing through a deep wooded ravine for a distance of about five miles, the hillsides heavily wooded with virgin hemlocks, great oaks, etc., there are several old dams reminiscent of the old grist mills that once thrived there, a roadway follows the creek, used by riders and drivers and cyclists, no automobiles are permitted. There are seventeen springs which flow into the creek in the area, thus the water temperature is kept lower than might bc expected. The area for the fishing is between County Line and Walnut Lane Bridge, a distance of about four miles.

The Wissahickon has had many experiments tried by our Philadelphia fishermen during the past seventy years, as the records show; back in 1874 the State Fisheries Commission, in its earliest days, netted black bass from the Delaware River to stock the Wissahickon, and later when the Commission began producing fish at its hatcheries, stocked this stream with either bass fingerlings or fry, in expectation of making the stream a good bass stream, but the results, as our records show, were never

what we today know on our bass streams of Pennsylvania.

PENNSYLVANIA ANGLER

With the growth of communities along the creek and its tributaries above County Line, some pollution became evident, so that proper interest in the stream was neglected by the fishermen, until an Englishman, a famous fly caster, who was in Philadelphia teaching fly casting, in a talk at a meeting of the Pennsylvania State Fish & Game Protective Assn. spoke of the great possibilities of making the Wissahickon a real trout stream. Acting upon his enthusiasm, the Association decided to get to work on it. First to make sure that any pollution be eliminated, a number of Committees were appointed of two each, each committee being assigned two miles of the stream and its tributaries above the Park area. Many sore spots were found, and, by courteous argument and sticking to their tasks, at the end of ten years the stream was considered sufficiently clean to warrant actual work on the stream within the Park area, then become known as "Stream Improvements."

The work of the small committees was of great value, we learned that the time to spot polluting spots is when the snow is on the ground, it shows up then as at no other time, we also learned that people are willing to cooperate in cleaning up sore spots, when properly approached.

Through close cooperation between the Fairmount Park Commissioners the Board of Fish Commissioners and the Pennsylvania State Fish & Game Protective Association a

plan was created to really improve the stream.

In 1935 a complete survey of the possibilities for various retards, deflectors, small dams and other improvements was made by Mr. O'Harra, the Engineer of the Fish Commission, approved by the Park Commission, which Commission obtained a WPA grant of \$20,000 and the Association furnished the money, about \$1,000 for the required tools and materials. All work was done under the Park Commission's supervision.

Since which time the Fish Commission has amply stocked the stream with trout and thus has provided the fly fishermen of Philadelphia with much enjoyment within the city.

Strict rules and regulations are in force. fishing allowed on Wednesdays and Saturdays only, during open season, fly fishing only, no spinners allowed, ten trout may be caught, but only three killed. The Park assigns an experienced guard to patrol the stream on fishing days, who keeps a record of the number of fishermen, the fish caught, and the number killed. The average number of fishermen through the years has been over sixteen hundred each season, over thirteen hundred trout caught, half of which were killed and the balance returned to the water.

It is doubtful that a similar project exists elsewhere in this country. To have an ideal trout stream within such wooded primitive surroundings, yet within a City of two million people, seems fantastic but it is a great success.

When this war is over there may be similai work projects available no one knows as yet what form of work may be provided, however a thought now for the future along similar lines may be helpful.



Courtesy Phila. Inquirer. Trout fishing in the City of Philadelphia.



FISHERMEN! HOW ABOUT TAKING A WOUNDED SOLDIER ON YOUR TRIP?



Johnny Mock

General Dwight D. Eisenhower, discussing the European conflict, expressed it as fighting to "get this thing over with so that we can get home and go fishing."

It is the fervent hope and prayer of all Americans that the General's words may soon come true.

For those on the other side of the big pond, it will be some time before they have the chance to follow in the footsteps of Izaak Walton, at least on home waters. There are, however, a number of the boys back from active duty, who are already in a position to cast a plug or fly or wet a line—those stationed at the Deshon Hospital.

Here is the opportunity to bring cheer, encouragement and inspiration, while time

heals the ravages of war.

"Take a wounded veteran fishing!" Make that your slogan. Share your next trip with one or more—count them in on the joys and pleasures of a day or two astream. Today, quartered at the hospital at Butler, is many a former fisherman, now miles distant from the lakes and streams he once fished, but capable of wielding rod and reel on waters nearer at hand—if those more fortunate are considerate enough to lend a helping hand.

Recently, Walter Staffer, of Etna, called in to learn what the procedure would be to have a couple of the boys stationed at Deshon accompany him on a two-day fishing trip to the upper reaches of the Alle-

gheny River.

We were at a loss for an answer, but promised to give it immediate attention, for we believed the idea was one which could be developed into something worthwhile, something which would meet with the hearty approval of many a member of the angling clan, if the necessary arrangements could be made with the proper officials.

Deshon Authorities Welcome Suggestion

A letter was forwarded to Col. C. J. Gentzkow, Commanding Officer at the Deshon General Hospital, outlining the proposal and asking for further information, after the suggestion had been given consideration.

Shortly thereafter we received a reply from 2nd Lt. Carl A. Kerr, AUS and Ass't Chief of the Special Services Branch, wherein he expressed the sentiments of the staff as being "very grateful for your interest and I am sure that if this can be worked out it would be excellent recrea-

By JOHNNY MOCK

All-Outdoors, Editor Pittsburgh Press

tion." He pointed out that the matter was being taken under advisement and a plan of procedure was promised within the near future.

Several days later the following communication found its way to our desk:

"Regarding the fishing trips which you thought of for our men here at Deshon, we have considered ways and means of arranging them.

"To see how many men would be interested, we can try it and discover how it might go over. The Red Cross Section here has been conducting a class in fly-tying under Dr. Bernard Hetrick; these men have shown an interest in the project. Other men might become interested in it.

"To go the men would, of course, have to have passes. A 24-hour pass might do the job, from 4 p.m. of one day to 4 p.m of the next; or a 36-hour pass might be arranged from noon of one day until midnight of the next. We think that two to four, or five men in a group would be most desirable.

"We assume that the host would provide transportation, picking the men up here at the hospital and bringing them back. We have a limited amount of tackle, not in toogood condition, which could be used by our men; any help in this from the host would be much appreciated.

"We would very much like to see this project amount to something. Can you let me know as soon as possible as to what can be done? It would be well to begin the trips soon. After we start and, if interest justifies continuing, we would like to arrange for each trip at least a week in advance"

Here's your chance to be a Good Samaritan.

When questioned regarding leaves of longer duration, it was pointed out that the boys were required to undergo a daily medical examination, but the authorities were willing to compromise, permitting the boys to forego this requirement one morning, hence the leaves from the noon of one day till noon or midnight of the next day.

Quick Response from Wardens, Commissioner

To date, all persons contacted have shown more than a willingness to help in the matter of providing fishing for the wounded veterans.

C. H. Kelly, manager of the Butler Water Co., has agreed to give free angling privileges to all service men at the popular reservoirs north of Butler.

Troy C. Burns, former district game protector of Butler County and now the local

sheriff, contacted Mrs. Frank Norris, treasurer of Butler County in regard to making it more convenient for the boys to acquire their fishing licenses, agreeing to send a representative to the hospital to issue the licenses. Incidentally, fishing licenses are issued free to all service men who were residents of Pennsylvania at the time of enlistment.

Copies of the Pennsylvania Angler will be mailed to the library, to keep the boys posted on Pennsylvania's angling.

Since regulations require a certain routine, the authorities would like at least a week's notice, in advance, of any contemplated trip.

One word of caution to the sportsmen who intend sharing their good fortune with those less fortunate. Don't discuss the war. Any reference to it is only depressing and apt to be a reminder of an unpleasant memory. Restrict your conversation to the home town of the boys and the fishing to be had. Confine the topics to the pleasures at hand and you'll assure your company an enjoyable and pleasant trip.

Here's the chance for individuals, as well as sportsmen's organizations to perform a real service to those who have already performed theirs. If each and every sportsman's association would sponsor but one such trip it would be a vital contribution in the responsibility of us all, which is—helping the returned soldier find his way back into the pattern of civilian life. In the case of an injured soldier, these duties are all the greater.

Let's make them part of that most comradely and understanding of all brotherhoods—the fraternity of anglers.

OUTDOORS CALLING

By BILL WOLFE

BLACK BASS. While doing my required reading in one of those peaceful moments of home study, I came across some scandal about black bass. It seems both the largemouths and smallmouths don't deserve the scientific names they bear.

The required reading in this case was Henshall's "Book of the Black Bass," the first part of which he devotes to the naming of the black bass. He traces the evolution of the names by which they are known to-day—Miscropterus dolomieu for smallmouth bass and Micropterus salmoides for the largemouth—through a hundred or more forms given by various scientists.

"Micropterus" means small-finned (which a bass ain't) and was given in error by a French scientist, Lacepede, because the first black bass he ever saw happened to have an abnormal dorsal fin with the last rays of it mutilated by some accident when the fish was young. He added "dolomieu" in honor of a friend.

The same scientist is responsible for the "salmoides" of the largemouth. He received a drawing of a fish from America. It was called "trout" or "trout-perch" on the drawing (still a common name for the largemouth down South) and so Lacepede named it Labrus salmoides—or "the trout-like labrus or wrasse" because he thought it looked like the European wrasse and he wanted to include its supposed trout-like characteristics in the name.

To make everything complete, "salmoides" isn't even good Latin according to the book.

FISHERMAN

Spends his time in pleasant dreams,
Of hidden lakes and favorite streams.
How he's go'in back some day,
And get the one that got away.
Keeps on tell'in, always wish'in;
Wants to live his life a'fish'in.
Sez, that even when he's dy'in,
Wants to smell of brook trout fry'in.
Fool's, around with hook and hackle
Blows his dough on boots and tackle.
Life for him can be excit'in,
Only when the fish are bit'in.

Only when the fish are bit'in.

Wasn't long and I was say'in,

This guy sure can stand some pray'in.

Couldn't understand this fellow,

Thought his brains were growing mellow.

Said that I should do some cast'in,

Try a sport that would be last'in.

I'l! admit, he had a reason,

Now I wait for fishing Season!

R. P. BERTERA.

It should be "salmonoides." However, when a black bass is on the end of a line, no one gives a hoot what its scientific name might be. DEMOISELLES. Note to Henry A. Nichols: Far as I know the demoiselle is another name for the damsel-fly, close relative of the dragon-fly. Most practical way for a photographer to get live specimens would be to take a butterfly net and go out and catch his own. The season is a bit late for such collecting, however.—Philadel-phia Record.

HE DIDN'T LOSE THE SHIRT

Among the many stories drifting back to civilization from the "fishing front" comes one that should not go by the board without mention. Priding himself among the foremost fly-casting fishermen in Pennsylvania is our erstwhile fish warden for Union and Snyder Counties, A. S. Snyder of Middleburg. Seems that "Art" was plying his skill on the tricky waters of Penns Creek recently using rather light dry fly-casting equipment. "Wham"-and the line tightened and "Art" landed a fine undershirt non the worst except for a grand soaking. boys 'round about Middleburg recall "Art" having come close to losing his shirt many times are now wondering just how in 'hevvins' name he'll ever get into this one.

In bait fishing, a leader longer than three or four feet is seldom necessary.

It pays to angle for big trout in small feeder streams (unless they are posted) early in the season. Some really nice trout enter these feeders to spawn, and usually they remain in the tributaries as long as the water level is good.

The spoon type of lure is about the only one that catches trout consistently, and the reason is obvious. Big trout feed deep and live in fast water. Casting lures other than spoons are difficult to get deep and to control in this type of water.



Tunkhannah Creek, Susquehanna County.

OUTDOORS CALLING

By BILL WOLFE

LUCK AS A FACTOR. Some anglers can catch many more fish than others. There are good reasons for this—and not one reason has much to do with theory.

The successful angler knows the water well, or else can spot in one stream conditions similar to those he encountered when catching fish in another stream. He will know what water most likely contains fish and he will fish it hard, ignoring the less likely stretches.

Furthermore, if he covers a bit of water he will do it thoroughly, not passing up a single good riffle or pocket or pool. He will know approximately under what conditions trout struck before and he will try to come close to duplicating them. That's the best that anyone can do.

Take the matter of changing flies and consequently changing your luck from bad to good. You have been fishing with a Royal Coachman without luck and you change to a female Beaverkill. On the first cast with the new fly you catch a fish. You swear by the female Beaverkill as a result—but are you certain that luck didn't play a big part?

Perhaps you had interested the trout in the Royal Coachman and it was ready to strike on the next cast—but before you made the next cast you changed flies and it hit the female Beaverkill. Perhaps the brief time you rested the pool while changing flies made the trout strike on the next cast with the new fly. Don't credit yourself with too much skill when something like this happens, but just accept it as a nice gesture from providence.

I have been on streams, fishing without luck until I changed flies and then the fish started to strike furiously. I have also been angling with one fly without luck and suddenly the fish started striking at the same fly in a feeding period.

How can I tell that in the first instance

changing the fly changed the luck or whether the fish just suddenly decided to feed as they did in the second instance where the fly was not changed? I can't.

I have watched bluegills chase a fly for several casts with considerable interest and then show no interest in it. I have then changed flies and they showed renewed interest for several more casts. Did they do it because it was a new fly, or because I rested the pool while changing flies?

WINTER TALK. This discussion properly belongs to winter, which is the season when anglers gather around a bottle and a radiator and talk about fish as though the fish possessed far keener minds than their own.

It's the thing that makes angling as interesting as it is. You never know what to expect in a stream. Fly-casting is somewhat like watching a ball game—you never know when someone will hit a home run and the same tenseness is there, except that you are the player and your antagonist is a fish lying in the stream at some unknown spot.

You devise theories about catching him. You work to imitate nature and to study the ways of the fish; but you know darned well that if you are lucky and persistent you will catch fish and if you aren't you won't take many.

If you had a perfect theory and were certain that each time you went fishing you could catch the limit you would lose interest in the sport.—Philadelphia Record.

No angling kit is complete unless it contains a variety of weedless artificial lures and also some weedless hooks for bait fishing. By the way, weedless lures should be fished so that you can feel them bumping against weeds and other obstructions, else they are not getting deep enough into the water to do their stuff properly.

-Williamsport Grit.

BUY BONDS

THE "NAMELESS"

The Story of a Fly, Created to Fill in a Few Odd Winter Moments,
That Proved a Fine Bass Lure

By DICK FORTNEY

TWO winters ago, in one of those inventive moods that grips every tier of trout flies, the vise on my work table was the birthplace of an odd-looking lure that I would like to share with readers of Pennsylvania Angler because in two summers of fishing it has proved one of the most productive of lures for the small-mouth bass.

It's a cross between a bass bug and a dry fly, bulky and awkward in appearance; it's temperamental as the fish it catches.

And for want of a better name I have dubbed it The Nameless.

"For goodness sake, what do you expect to catch with that freak?" demanded my non-fishing wife when I had completed the fly. I confess now that something of the same idea was in my own mind as I dropped it into a little cardboard box and put it in the bass tackle box. The lure was completely forgotten all during the trout season and for the first couple of weeks of bass fishing the following summer.

Then one evening on a bass creek, just after the sun had disappeared behind a low hill across a wheat field, I saw the placid water of a pool of medium depth suddenly dimpled in every direction by feeding fish. One fishing companion tried a large trout fly of the bivisible pattern, but had only a few half-hearted strikes. Another friend fished live bait without a touch. A third skillfully covered a part of the pool with a bass bug of conventional size but connected with not one of the feeding fish.

There appeared before me, suddenly, a vision of the lure I had made that winter evening months before. I found it in the bottom of a box of bass bugs in my jacket pocket, tied it on the lightest leader that seemed practical, and tried my own hand.

For half an hour I had the fastest action bass angling has ever produced. Nine out of every ten fish rising within range were securely hooked and netted. When the rise ended the fly was a wreck—its body flattened out, the tail all but chewed off, and the hackles bent all out of shape.

But The Nameless had produced.

The fly is simplicity itself. The body is of clipped deer hair (like the body of any bass bug). The hackle is long and thick. The tail, also of deer hair, is short and of medium thickness. There are no wings or legs or other appurtenances. The completed fly is about an inch and three-quarters long, from eye to tip of tail; the body about as thick as a pencil, and the hackle about three-quarters of an inch in diameter. Some of mine have hackle even an inch across.

The method of tying is simple. (See illustrations).

Place a long-shank Size 4 or 6 hook in the vice and proceed as in the construction of a bass bug, using hair from the flanks or belly of a deer. A bunch of hair about the thickness of a match stick is tied at the bend of the hook, to form the tail (Fig. 1). Then bind to the hook four or five larger bunches of hair, pressing each bunch firmly back on the hook and filling it to within a quarter inch of the eye (Fig. 2).

When the deer hair is in place, it should be trimmed as closely to the hook as is possible, for the completed fly is light and does not need a heavy body to help it to float high on the water. Be particularly careful to trim the bottom of the fly so as to give the maximum hooking space at the point. The fly at the end of this process should appear as in Figure 3. Taper is not necessary in the body, I have discovered.

Close against the front of the completed body tie in a large, stiff saddle hackle (Fig. 4) and wind it compactly into place, as in the construction of a trout fly. Then wind on a second saddle hackle, and even a third if there is space enough.

The size of the saddle hackles deserves careful attention. This type of hackle is not sold in sizes, as are the smaller feathers, and in constructing The Nameless you must be certain to select hackles large enough to help support the lure on the water. I like feathers whose barbules extend out three-eighths or one-half an inch from the stem. They positively must be stiff and bunched firmly together on the hook. The larger hackles from a dry fly gamecock neck may be used instead of saddle hackles, if desired.

Finally, finish the job with a carefully and well constructed head and a whip finish, being careful to leave plenty of room for attaching a leader to the eye of the fly.

Figure 5 shows The Nameless finished.

I have made a two-summer study of color combinations, keeping careful records of the action produced by each one, and the following are listed in the order of their bassallure:

- 1. Natural gray body and tail; brown hackle.
 - 2. Black body and tail; barred rock hackle.
 - 3. Brown body and tail; ginger hackle.
- 4. White body; yellow tail; yellow hackle.
- I recommend the gray and brown combination because that was the color of the original The Nameless, and I used it—successfully—until it was so badly battered that it would no longer float.

Incidentally, you can make the fly more attractive, at least to the fisherman, by putting a band of gray on the black bodies or a rib of black on the gray bodies. Do it by tying in two bunches of hair of one color, then one or two of the stripe color, then the rest of the original color. But the bass probably won't appreciate it the more.

The Nameless is very simple to use. Being light, it can be cast with a trout rod of only three and a half or four ounces. As a

leader I knot together about three feet of six-pound test nylon and the butt end (about four feet) of a nine-foot tapered trout leader, tying The Nameless to the trout leader.

The technique of fishing The Nameless is important.

It is at its best when the fish are rising, dimpling the water and sending out fairly good sized rings on the surface. The trick is to cast The Nameless as closely as possible to the rise, allow it to rest quietly on the surface, and then give it the slightest possible twitch. Seldom does The Nameless get action if it is worked violently on the surface, and only occasionally when it is floating like a trout fly.

Just enough action should be imparted to the fly to make it appear to quiver or tremble on the water. Nine fish out of ten will take The Nameless with that sort of sucking strike that means a securely hooked fish, and you'll find that often the fish takes the lure so deeply into its mouth that extracting it is something of a problem. And since the lure is small and the tackle light, the hooked fish is sure to put up a good battle before it finally is drawn into the landing net.

I have caught fish with The Nameless at all hours of the day, but that quiet period between early dusk and complete darkness is the time it produces best. That is probably because bass and panfish (for this lure has a great attraction for rock bass, fall fish, and large sunfish too) do a lot of surface feeding at that particular time.

The lure probably is too large for consistently good fishing in broad daylight and in bright sunlight. It is so small and light that it is difficult to manipulate properly unless the angler can watch it closely, so it is not a particularly good night lure.

But the excitement it has produced and the competitions is has won! And the disappointments it has prevented!

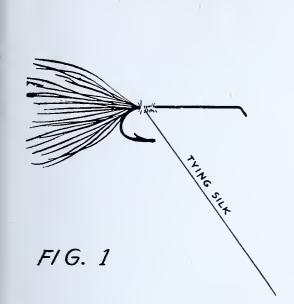
A friend used a copy of The Nameless one evening in a pool where we had spotted several good fish. On one cast he sent the lure riding down a swift, rather deep riffle at the head of the pool. There was a tremendous strike, and the rod was almost jerked out of my friend's hand. A great body swirled on the surface of the stream and tore free of the restraining hook.

But that fish was a monster brown trout—not a bass.

Incidentally, I have been so engrossed with experiments with The Nameless as a bass lure that I have not had time for trying it on trout. My friend's experience indicates it may have possibilities in that direction as well.

There is a pool on another bass stream in Central Pennsylvania which has provided some thrilling bass bug fishing for a group of us. We went there one evening last summer—and found a huge clump of water weeds in the very middle of the pool.

Fishing with a bug was out of the question, for in the darkness that would soon come avoiding those weeds would be impossible. While my friends struck out for another good stretch of water nearby I noticed a fish rise in a little bay at the far side of the pool. By wading out into the big pool and standing in the patch of weeds in water only half an inch shallower than



my boots were high, I could just nicely get The Nameless into the bay.

And in about an hour before complete darkness I hooked 34 fish in that little bay. True, not one of them was a keeper sized bass, but among the 34 were some of the largest rock bass and sunfish I ever have caught, and it was one of my greatest angling experiences.

In competition, too, The Nameless has come through.

In a stream noted for bass that have a weakness for the fly and spinner The Nameless has taken fish for fish with that combination. It has held its own against bait angling and plug casting-in the action produced if not in the size of the fish caught.

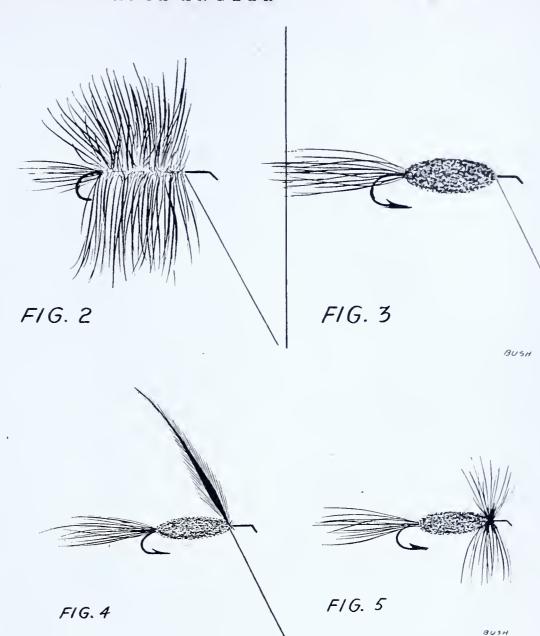
And, best of all, it has proved tops in that period late in the day when the light has grown too dim for spinner and underwater plug yet not yet dark enough for bass bug and surface plug-a period which is quite common on the bass creeks of Pennsylvania.

Admittedly there are patterns of The Nameless which I have not yet tried, and likewise not all fishing conditions have been tested.

But after two years of experiments with the lure and many hours of fishing thrills for which it deserves full credit, I give you The Nameless, dedicated in the words of the first of my friends who accepted a model of it from me and tried it out:

"Hot dog! It's a honey!"

A six-thread-line record for striped bass has been recognized by the International Game Fish Association. The record fish is Game Fish Association. a 57-pounder caught by Jerry Sylvester July 26 in the surf at Narragansett, R. I., and replaces Kip Farrington's old record of 38 pounds. The all-tackle world record for striped bass still stands at 73 pounds and is held by a catch made by C. B. Church off Vineyard Sound, Mass., 1913. Vital statistics on Sylvester's 57-pound fish: It was 53 inches long, had a girth of 341/2 inches, took 45 minutes to land with a Horrocks Ibbetson rod, a Penn reel, an Old Briny line and a feathered squid head jig.



TRADITIONAL AS GROUND-HOG DAY IN QUARRYVILLE

Holding true to a long established ceremony with the close of each succeeding Trout W. W. Herrold and C. G. Ryan of Lancaster, officially proclaim in novel fashion, the close of the season.

CERTIFICATION

TO WHOM IT MAY CONCERN, GREETING:

Be it known that we, W. W. Herrold and C. G. Ryan, citizens of the United States and residents of Lancaster, County of Lancaster and Commonwealth of Pennsylvania, did, on the 31st day of July in the year of our Lord Nineteen Hundred and Fortyfour and the One Hundred Sixty-seventh year of our independence, within the confines of the Township of Martic, in the said County of Lancaster and the said Commonwealth of Pennsylvania, and more specifically at Tucquan Creek, at or about 9:12 P. M., E. W. T. did cease and desist fishing. By such act the said W. W. Herrold and C. G. Ryan, officially, by, for and on behalf of all licensees of the Commonwealth, did close all of the piscaries of this the said Commonwealth, to angling for or taking of the genus Salmo, the genera Salvelinus and Cristivomer, and all of the various and sundry species thereof, more commonly and generally known as Trout, all in accordance with a certain Act of the General Assembly of the Commonwealth of Pennsylvania, aforesaid, dated May 2, 1925, P. L. 448, as the same has been from time to time amended.

In Witness Whereof, we have caused these presents to be executed in the presence of witnesses, on this 2nd day of August, 1944.

> W. W. HERROLD, C. G. RYAN.

Witnesses:

ANNA STEPHAN, JESSIE WIREBACK. National Association of Angling and Casting Clubs 1st Report of the Committee on Tackle Terminology

Your committee on Tackle Terminology submits this part of its report in jest, not in any effort to be funny, but because "Many a true word is spoken in jest," and many persons actually have such ideas. Upon that premise, the following definitions or explanations are offered for what they are worth.

ANGLE, an idea.

BAIT, something for the angler to spit on, usually a worm.

BAIT BOTTLE, a dark colored, hollow vitreous receptacle, preferably of coatpocket size, usually filled with enthusiasm in the morning and always empty at night.

BITE, when a black bass grabs a minnow, chaws it to death and spits it out, it constitutes a bite, but it doesn't help the score.

CREEL, handy article, basket to you, in which to carry beer and sandwiches. One with a cover that will lock is best. Then you won't have to prove it when you tell someone you caught something, tell them you lost your key.

CLICK, a musical attachment to a reel, about as musical as a corn shredder.

FISHING DRY, going fishing without a bottle.

FIN, a five dollar bill.

FISH, a gullible person.

FLY, a tinseled and feathered delusion, extensively used as a decoration for tree tops and hats. Most flies will tempt more fish if a worm or minnow is attached. Don't bother to buy flies. When you see someone sorting theirs, admire some and you will probably be offered a few. You can acquire quite a collection in that way.

FLY FISHING, wading a cold stream, sitting down in it now and then; monkeying a fly in the water, or hooking it onto the neighboring bushes and calling it sport.

GUIDE, a native who is hired and well paid, to go along. Presumably he does the hard work and presumably you catch the fish; but sometimes it works out the other way.

HOOK, "Deceitful above all things and desperately wicked." Jer. 17:9.

LEADER, there are several kinds. The one that breaks is the most common. Leaders usually glisten. This is to take the fish's mind off the line.

LINE, a high-priced variety of pack-thread, coiled up in measured lengths. If you want a line that gets stronger the more you break it, get a tapered one.

NET, a handy thing to catch your hat or pipe when you drop them in the water.

REEL, in miniature the crank of a grindstone, the spool of a windless, the break of a trolley car, the slickness of a bunco starter, and the howl of a coffee mill. Reels should be made of the lightest metal or composition, though the prices may indicate gold or sterling. They are primarily for taking in line but more often take in the fisherman.

RISE, when an angler sits down in cold water, he usually rises and also makes a few remarks, not intended for publication,

DROUGHTS OF THE FISHERMAN

The average fisherman, whenever time permits will go fishing, whether hot or cold, fair or rain, streams high or low, catch or no catch, he still goes fishing; a most wholesome frame of mind, but in a general way, nothing affects this sport of sports so much as hot, dry weather.

Many fishermen become discouraged during droughts because they cannot score any catches and in too many instances draw the conclusion that there are no fish in the stream. They fail to really give some thought as to the real reason for their inability to make catches.

The habits of fish are very subject to the effects of varying forces of the elements.

When the streams become very low and there is a limited movement of water and the sun shines upon it day after day the temperature of many stretches of streams becomes unbelievably high.

When stream temperatures run high the supply of oxygen is greatly decreased and this in turn causes the fish to become sluggish and inactive. They feed very much less than when stream temperatures are normal and in most instances will seek some deep, cool, secluded spot.

During drought periods the best results can be had after sunset when the temperature will drop in varying degrees, or in the very early morning before the temperature rises. The most successful lure is the artificial because during very hot weather fish feed very little and they will strike an artificial lure with a spirit of pugnacity rather than an intention to feed.

However, the greatest effect that droughts have upon fish and the one perhaps the least thought of by the fisherman is the future supply of food.

During droughts the beds of many streams go dry and it is always the ripple stretch of streams that is affected most, and that stretch is the richest in all kinds of fish forage.

When this happens there are thousands of all kinds of insects and crustaceans that die due to the lack of water and this is a real loss and will affect the future number and condition of our fish.

HARRY Z. COLE, State Fish Warden.

—(From The Sportscaster, Perkiomen Valley Sportsmens' Association.)

but which are a sufficient guarantee of good faith on his part.

ROD, any angler who does not know a fishing rod when he meets one, is too much of a dope to learn anything from this.

SNELL, a short section of the intestinal secretions of a silkworm, tied to a hook, chiefly for the purpose of enhancing its selling price.

SPECKLED BEAUTIES, a phrase once much in vogue, but now used only by idiots and some writers.

SPORTS-MAN, a man who enjoys hard work with no pay, and prefers the leaky tents of barbarism to the comforts of civilization.

STRIKE, an excellent way to break a rod, especially if you have hooked onto a sunken log, tree root or rocky bottom.

FISHING SEASON

Funny how a whole new vista of life opens up when spring comes. And one of the most popular sports which is eagerly awaited by both young and old, is that of fishing. From the first day on, there's constant interest for the confirmed fisherman in catching the elusive under-water creatures.

They are stirred by the call of fish brooks and lakes and they work over their fishing equipment for hours, perfecting each bit of it from the fancy flies which they take such pride in to the tackle and reels and the pretty bobs.

Fishing is one of the oldest forms of sport known to man, and countless men and boys as well as the womenfolks in modern times, have enjoyed the piscatorial art of hunting out the elusive sea creatures and bringing them home to be neatly done to a crisp brown and eaten by the fisherman and his family.

Though today the nations which live on profits derived from fishing are almost extinct, it was one of the chief means of sustaining life for many of the people who lived on good fishing shores in days gone by. During the fishing season they plied their trade with nets and boats and during the winter months they spent their time in repairing nets or weaving new ones while they eagerly waited the clear blue summer skies to put to sea again.

Fishing seems to call for a certain patient and philosophic point of view. Many fine decisions and noble acts first see the light of day while a man is sitting on the bank of a stream waiting for a "bite" and letting his thoughts drift down the stream and swirl in little eddies at his feet.

Perhaps during these war years there is much more to be gained from fishing than in former times. It does us all good to get away from the rude reality of war to the quiet of a fishing pond, to sit in a boat and dream with little thought except to pull in the fish, bait the hook, cast the line again into the water to one's hearts' content. Then pull up stakes and home to feast on the day's catch which comes in handy in the present day.—Bangor News.

The top part of a dog's head is sensitive. So pat, it gently—and don't yank his ears and pull his nose either. All dogs like to have their heads and ears gently rubbed—but no animal likes to have its head pounded.

The ice fisherman wastes his time if he hangs around the pond or stream after nightfall. Fish don't bite well after dark during the winter. The brightest period of the day which is also the warmest, usually produces the most action for the angler.

Judge:—"Do you understand the nature of an oath, madam?"

Witness:—"I should say I do! I was in the car that bumped into your car this morning."

BUY BONDS

IT'S FUN! HELPING TO STOCK PENNSYLVANIA STREAMS



Laucaster County sportsmen meet the trucks and assist in stocking.

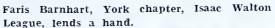
Sportsman-cooperation, you bet! York County sportsmen turn out to help "put 'em in."



Bill Kauffman, prominent York sportsman, helps stock trout in Orson's Run.



Lancaster County sportsmen stock trout down Lancaster way.









IN THE SHADOW OF THE CAPITOL - - - FISHING FOR B

Highlights From the Bass and Pickerel Waters of Pennsylvania

Gathered and Checked by our fish wardens—all over the State.

Mr. and Mrs. John Slautterback of 22 E. Walnut St., Kingston, while fishing, on three different days, in the North Branch of the Susquehanna River at Whites Ferry were successful in taking one wall-eye pike, weight 6½ pounds, length 28¼ inches; one 3 pound smallmouth bass; two 2½ pound smallmouth bass and four smallmouth bass weighing 2 pound each during the month of July.

Charles Roberts of Plymouth, caught a smallmouth bass, weight 4 pounds, length, 19 inches, in the North Branch of the Susquehanna River.

Thomas Evans of Duryea, caught a small-mouth bass, length 18 inches, in the North Branch of the Susquehanna River.

-Russell J. Womelsdorf, Fish Warden, 241 Pierce St., Kingston, Luzerne County.

Steve Balschi, Catawissa, Pa., caught a wall-eyed pike in the Susquehanna River, near Catawissa, Pa., weight 5½ lbs., length 27½ inches.

Frank Long, Bloomsburg, Pa., took a black bass in Fishing Creek near Bloomsburg, Pa., weight 4½ lbs., 20½ in. in length.

Carl Fetterman, Numidia, Pa., landed a brown trout in Lick Run, near Newlin, Pa., weight 3½ lbs., 20 inches in length.

Now in the U. S. Navy, he caught several nice trout while home on furlough.

—Charles Litwhiler, Fish Warden, Numidia, Pa., Columbia County.

Elmer Shoop had the nicest catch I checked yet. He caught them in the lower end of Clarkes Creek. He had six bass the smallest one was 15 inches long, and the largest was $20\frac{1}{2}$ inches.

—B. F. Barnhart, Fish Warden, Union Deposit, Pa., Lebanon & Dauphin Co's.

Mrs. Fred S. Fisher, Mifflinburg, Pa. caught a smallmouth bass 18 inches long, weight 4 lbs.; Dr. Ralph Litzel, Mifflinburg, Pa. one 19 inches, 4¼ lbs.; Mr. C. A. Kniss, Mifflinburg, Pa., made some very nice catches on dry fly this season; Mr. Mose Batman of Penns Creek, Pa., made some very nice catches, also David Fredrick, Mifflinburg, Pa. These bass were all caught in Penns Creek, Union and Snyder Counties.

—A. S. Snyder, Fish Warden, Mifflinburg, Pa., Union & Snyder Counties.

Smallmouth bass, 4 lbs. 6 oz. taken by D. L. Moore in Quaker Lake, Susquehanna County, 21 inches long. Bait, crab.

Smallmouth bass, 4 lbs. 181/2 inches long,

taken by Harry Schlagel of Montrose in Heart Lake, Susquehanna County. Bait, plug.

—G. Max Noll, Fish Warden, Montrose, Pa., Susquehanna County.

I did not see the bass or pike but I heard that some large fish were caught in Stillwater Lake, Naomi Lake and Brady's Lake. I didn't learn the names of the fishermen as they were residents of other counties.

—Floyd Bachman, Fish Warden, 49 Broad Street, Stroudsburg, Pa.

I have seen several large mouth black bass caught at Spring Pond and heard of two being caught there one six and the other eight lbs. I did not see either of these. Floyd Babcock, Canton, did catch a smallmouth bass on the North Branch twenty-one inches long that weighed five lbs. and two oz. I measured and weighed this fish. I measured a pike perch caught below Monroeton twenty-eight inches long.

—Paul D. Wilcox, Fish Warden,

Canton, Bradford County.

I believe there were more fishermen this year than last year but I had very few non-resident fishermen. The catch was above normal of other years. Bass, perch, sunfish and catfish seemed to be plentiful, but we do not have much water for walleyed pike.

-Clifton E. Iman, Fish Warden, Evans City, Butler County, Pa.



D SALMON - - - SUSQUEHANNA RIVER IN HARRISBURG

I saw some very nice bass taken from Comfort Lake, Susquehanna County, 2 to 4 lb. pike from Wrighter Lake, Susquehanna County, up to 29 inches. Pickerel from Sicklers Pond, Lackawanna County, 18 to 30 inches.

—Keith Harter, Fish Warden, Dalton, Pa., Lackawanna & Susquehanna Co's.

Charles Bailey, 2923 Weikel St., Philadelphia, Pa., caught a largemouth bass length 19 inches, girth 13¼ inches, weight 4 lb. 4 oz. in Crum Creek.

Harry Morris, 2237 Larue St., Philadelphia, Pa. one largemouth bass length 17½ in. weight 2 lb. 8 oz. caught in Crum Creek.

Francis Nikodenski, 20 W. 5th Ave., Coatesville, Pa., one largemouth bass length 17½ in. weight 3 lb. 12 oz. caught in Rock Run.

—Horace A. Pyle, Fish Warden, R. D. 2, Coatesville, Pa., Chester and Delaware Counties.

Bass fishing was better in Lake Harmony than any previous year. Also bass fishing in Lizard Creek improved tremendous. I have no record of bass being stocked in Lizard Creek. However, they are on the increase, especially the lower end of stream, from the mouth upstream about a mile.

-Rayel Hill, Fish Warden, Bowmanstown, Pa., Carbon County. No real large bass were caught, nothing spectacular, but more fine bass were taken this year than ever before.

-Robert J. Chrisman, Fish Warden, Kushequa, Pa., Elk & McKean Counties.

Little Mahoning Creek, Indiana Co., is our best warm water stream. It has remained muddy or murky most of the summer, but they have caught as near as I know, approximately two dozen bass, these figures are not low, maybe little high. Suckers, catfish and sunfish have afforded some fair fishing, but rock bass fishing has been good. North Fork Creek from the mouth up stream to the Brookville Dam, produced some fine bass catches this year. They appear to come up out of Red Bank Creek. A few were taken on Big Yellow Creek.

Dean R. Davis, Fish Warden,
 W Mahoning St., Punxsutawney,
 Jefferson and Indiana Counties.

2 large bass caught (1) Mrs. Vernon Mc-Coy, Kettle Creek, 18½ in.; (2) John Redos, Jr., S. Renovo, Pa., 16½ in.; 4 large brown trout, Swift Brothers of Clearfield, Pa., 20 in., 22 in., 24 in., and 26½ in., Wt. 7¼ lbs.; 1 large fall fish, J. H. Painter, Sec. Clinton Co. Fish and Game Assoc., Lock Haven, 22½ in.

—Michael J. Redos, Fish Warden, 725 Penna. Ave., So. Renovo, Pa Maiden Creek, July 14th, 1 largemouth bass 20 inches, 61/4 lbs., caught by Don Holt, Shoemakersville, Pa.

Ontelaunee Lake, July 28th, 22 inch largemouth bass, 4½ lbs., caught by Ralph Keim, Leesport, Pa.

Ontelaunee Lake, July 1st, 10 crappies 12 to 15 inches, 1 smallmouth bass 17½ inches 3¼ lbs., caught by Ruevin Forney, Leesport, Pa.

—W. E. Wonderly, Fish Warden,615 Eisenbrown St., Reading, Pa.,Berks County.

Bass 193/4 inches caught by George Hatherell, Wellsboro, Pa., caught in Pine Creek. Lure artificial fly.

-Leland E. Cloos, Fish Warden, Middlebury Center, Pa., Tioga County.

48 inch muskellunge caught by Tracy Neely of Alum Rock, Pa., weight 23½ lbs. This was caught in the lower end of the Clarion River.

38 inch muskellunge caught by Guy Heffner of Wentlings Corners. Caught in the Allegheny River.

—Charles A. Wensel, Fish Warden, 145 Main Street, Clarion, Pa. Clarion County,

(Turn to page 14)

To the National Association of Angling and Casting Clubs: Report of the Committee on Standardization of Tackle

It has proven impossible to arrange a meeting of all of the members of the Committee on Standardization, and exchange of views by mail is never very satisfactory, due to the enormous amount of correspondence involved in such a procedure where so great an amount of detail must be considered. Moreover, the time of members has been so completely mortgaged to war work that it has not been easy to conduct even a limited correspondence.

In order to operate efficiently it would be most desirable to arrange that a committee be appointed which could meet without burdensome inconvenience for discussion of the problems involved, and agree on assignments of portions of the work to individual members, whose work could then be correlated at further meetings. To do this by mail is not practicable. A convincing confirmation of the soundness of this arrangement was evidenced by the fact that in one short meeting between the chairman and another member, Mr. H. H. Smedley, more was accomplished than by all of the correspondence which was possible.

Your committee is gratified to report that the response of the sports press to the adoption of standards on fly lines and on leader materials was almost uniformly favorable, and that support appears assured when the time comes, at the end of the war, to urge manufacturers to standardize such items of tackle as study discloses would benefit the angling fraternity. Very little expression of opinion has been forthcoming from the tackle manufacturers themselves, as it has been deemed inadvisable to attempt to inject so controversial a matter into their welter of problems. Tackle makers generally speaking have been engaged in war work, and very little tackle for private consumption has been produced. When the time arrives that they are again seeking approval of angler buyers on their products, it should be a much more opportune time to endeavor to enlist them in a standardization campaign.

Any progress toward standardization must have the willing and active cooperation of the tackle manufacturers to be effective, and such cooperation is at the moment manifestly out of the question. No attempt has been made to set up additional standards even for use by the membership of the N.A.A.C.C. Indeed, even if the time were ripe for establishing such standards, it will be necessary to secure a large amount of data from manufacturers in order to do so, and any attempt to collect such information while the manufacturers are harassed by more vital problems would certainly meet with merited rebuff.

This report will, therefore, confine itself to a consideration of possibilities of tackle standardization, rather than with concrete suggestions for establishing standards. The brief study which we have been able to give to the subject has disclosed that there are several items which appear to be in acute need of standardization, and these have been given superficial consideration. The analysis is admittedly cursory, and the results are far from conclusive.

Your committee believes that the possi-

bilities of standardization may extend to a considerable range of items, which may in due course be taken up by future committees, but that it would be more likely to be productive of results if only the more obviously standardizable ones be studied until such time as standardization becomes more thoroughly an accepted desideratum.

Those objects most in need of standardization are manifestly those which must be used together, and which must therefore fit one another.

Included in such a list are clearly reelposts and reel-seats, rod ferrules, screws used for assembly of reels and other parts not of necessarily specialized design.

Quite as important, to make standarization effective in practice is the establishment of uniformity in terminology. There should be possible the establishment of labeling requirements on all items of tackle where specifications are not readily observable by the buyer, and where guesswork in buying may be eliminated or at least minimized by such labeling.

This would include, among other things, labeling of reels to show line capacity and weight; labeling of casting lines to show gauge and weight per unit of length; labeling of rods, reels and baits, to show all physical specifications, labeling of boots and waders to show sizes calculated to correspond to the shoe size of the wearer rather than on the present arbitrary and far from uniform scale, as well as a host of other lesser sources of irritation to the buyer.

It is suggested that a further class of subjects suitable for consideration is that of items which are sold by size and pattern, such as hooks, rod guides and flies, whose designations now are often misleading if not utterly meaningless.

As no time has been available for the study of all of the above classes, your committee has selected for present consideration only the subjects of rod fittings and reels, with the hope that the incoming committee may develop further the ideas here presented

The remaining subjects, it is hoped, may be given study eventually as progress in the standardization of those already started is attained.

Specifically to discuss subjects suggested for immediate study, it is most annoying to be obliged to attack a reel-seat or a reelpost with a file to make them fit one another. We have been told that there was at one time an attempt made to standardize reelposts so that all reels would fit all rods, as of course they should, within reasonable size ranges. If this is in fact true, it has been a sorry failure. It is quite common to purchase a reel and find that it must be worked on with a file to make it possible to get it on one's rod. This is not confined to freak reels and freak rod fittings, but frequently happens when items of well known make are involved. Not only are the reel posts not standard, but also they are all too often so carelessly designed that they will work loose even when they can be assembled to the rod. The mere fact that work with a file

will make them fit is the best evidence that a good, uniform design of reel-post could easily be devised, and would be if sufficient customer pressure were applied. In order to make such standardization effective, however, it would have to be accompanied by a sumultaneous standardization of the reel-seat. This should present no difficulties, provided that acceptable designs were submitted and adopted.

The other subject on which it is believed that further study at this time might produce beneficial results is that of rod ferrules. While ferrules, nominally, are made in a range of sizes by 64th of an inch, these are not made to sufficiently close tolerances to be interchangeable, even with ferrules of the same make, with rare exceptions. Investigation appears to show that this is not at all an inherent condition, but one which could be corrected easily by mutual agreement among manufacturers. Without that close adherence to tolerance, no scale of sizes would have any meaning at all. An ideal condition would be to have all ferrules made by a single manufacturer, who would supply all others, at least where high grade rods are involved. With cheap rods, the expense of maintaining tolerance would be prohibitive, and in any case interchangability would be of minor importance, if of any at all.

It is the opinion of the committee that two ranges of sizes would be required, one for original equipment, and one for replacement after the original ferrules were worn down. It is possible that the succession of sizes should be by smaller differences than by 64ths too. Insufficient study has been given to give a definite answer to this question, but it should be investigated. A 64th is quite a lot, and split sizes might be desirable, particularly in the smaller ferrules.

For replacement ferrules the males should be ever so slightly oversize, to permit working to fit, and females likewise fractionally undersize. For original equipment tolerances should be as close as manufacturing methods would permit, with no plus tolerance at all on females, and no minus tolerance on males, so that fitting would be minimized, if required at all.

As was pointed out in the report of the 1942 committee, it is not within the scope of the N.A.A.C.C. to attempt to dictate to tackle manufacturers how, or to what extent to standardize their products. Nevertheless, as a representative body composed of customers for these products we deem it our privilege and right to make our wants and preferences known to them, and to recommend to our members products which conform to our specifications. It is also our right to establish standards acceptable to us, and restrict manufacturer certification that N.A.A.C.C. standards have been adhered to only when such products have been submitted for verification that such adherence is factual. It is, of course, the privilege of any manufacturer to make and offer for sale anything he pleases. It is believed, however, that most manufacturers would welcome the assistance of a representative body in establishing reasonable and useful standards, and that when the war is won a joint committee of the N.A.A.C.C. with manufacturers and with any other representative sportsman groups interested could and should be established to carry on the work which this body has pioneered.

RECOMMENDATIONS

In conclusion, the committee respectfully recommends the adoption of the following principles by the N.A.A.C.C.:

1. That the Committee on Standardization of Tackle be so selected that all or most of the members thereof shall be residents of the same general territory, in order to make personal contacts possible. The Chairman of the committee should, each year, be selected from the membership of the committee of the previous year, in order to assure continuity of the work and to avoid loss of knowledge and experience already gained.

2. That the committee for the ensuing year be charged generally with exploring possibilities for further standardization, particularly in the matters of terminology and of the labeling of products adequately to show the physical characteristics and capacities, etc.

3. That the committee for the ensuing year be charged specifically with the design of a standard N.A.A.C.C. reel post and specifications for a standard reel seat to match it, and also with further investigation and report on the establishment of standard sizes and tolerances on rod ferrules.

4. That the committee be empowered, should the time be deemed opportune during the next year, to enter into negotiation with tackle manufacturers and with other representative sports organizations with the object of establishing a joint committee on standardization of tackle which would be recognized both by the trade and by the angling public as clothed with authority to set up and install standards of sizes, designs, tolerances and terminology.

Respectfully submitted,

Committee on Standardization of Tackle, Philip M. C. Armstrong, Chairman, Harold H. Smedley, William B. Sturgis, Ernest W. Robinson.

Rainbow trout caught by Willard F. Deater of Meadville, 26½ inches long and weighing 634 lbs. It was taken on a copper chum wobbler in Lake Pleasant, Erie County.

ELISHA KENT KANE HEIRS GIVE STATE WOODLAND FOR MEMORIAL PARK AND LAKE

Grant Is Subject to Certain Stipulations Included in Deed, Recorded at Smethport

Kane, Aug. 11. (Special)—Conveyance of 2,200 acres of land, including much timber land to the Commonwealth of Pennsylvania, Board of Fish Commissioners, by G. C. Burch, trustee, and E. Kent Kane, and wife for the purpose of establishing a public recreation area in memory of the late Elisha Kent Kane of Kushequa has been completed by the parties involved, it was announced yesterday.

Subject to Stipulations

The grant is subject to certain stipulations included in the deed, which was recorded at Smethport on August 5, 1944.

The park site is situated between Hazel Hurst and Clermont in the hilly section of that territory. One tract comprises 1,175 and the second has 1,025 acres more or less. Both are in Sergeant township.

Reserved by the grantors are the coal, oil, petroleum and natural gas rights and rights freely to drill or produce and carry away any of the same.

Other specific conditions restrict the grantees as follows, the lands shall be used as a public forest park and recreational area; the area is to be named the "Elisha Kent Kane Forest Recreation Area" and so marked on the premises and such maps or publications of the Commonwealth as refer to the area; no hunting or shooting will be permitted upon the premises and no trapping will be allowed excepting that required in the opinion of the Commonwealth to rid the area of injurious animals; no trees may be cut from premises only as required for construction of roads, camp sites or other desirable purposes. None may be sold, and lastly, within ten years after the date of agreement the Commonwealth of Pennsylvania must agree to build a dam on Five Mile Creek sufficiently large to create a lake for fishing or recreation with a surface area of at least 200 acres. This lake must be named "Ellensmere" in honor of Zella Ellen Kane, wife of Elisha Kent Kane, or "Lake Zella" if the grantee prefers.



24 inch brownie caught by Herb Hummel in Lake Wallenpaupack, April 30, 1944.

Kenneth Davis, age 10 years with several nice small mouth black bass caught in the Allegheny. Ken lives at Wilawood, Pa.







HIGHLIGHTS

(Continued from page 11)

Dave Corbin, Huntingdon, Pa., one small-mouth bass 21½ in. 5 lb. Juniata River.

Edgar Stouffer, Huntingdon, Pa., smallmouth bass 20½ in. 4¾ lb. Juniata River.

C. J. Cherry, Huntingdon, Pa., R. D. largemouth bass 18½ in. Raystown Dam.

James Kyper, Huntingdon, Pa., small-mouth bass 16-17 in. Raystown Branch.

Fred Mark, Huntingdon, Pa., smallmouth bass 16 in. Raystown Branch, all caught on plugs.

Walter Grove, Huntingdon, Pa., caught one eel 47 in. $8\frac{1}{2}$ lb. Raystown Dam.

Ted Miller, Bellwood, Pa., one eel 33 in. Raystown Branch.

Lincoln Lender, Fish Warden,1014 Pa. Ave., Huntingdon, Pa.,Huntingdon & Mifflin Counties.

September 11, muskellunge, 39 in. long, weight 16 lbs., caught by L. E. Kaake of Coudersport, in Oswayo Creek, near Shingle House, Pa., also 24 in. pickerel, caught in First Fork of Sinnemahoning, Aug. 12th by L. E. Kaake.

—Teal J. Cox, Fish Warden, 748 N. Main St., Coudersport, Potter County.

Kenneth Arnold, 556 Meek Street, Sharon, Pa., on July 17 caught a musky near Slackwater Bridge on Shenango River, length 48 in., weight $28\frac{1}{2}$ pounds.

An unknown fisherman from Pittsburgh caught a musky in Sandy Lake on August 27, length 44 in., weight 20½ pounds, was not able to get his name.

Erny Patton of Sandy Lake caught a 33 inch northern pike, 9½ pounds in Sandy Creek.

Charles Steffee of Jackson Center caught two Northern Pike in Sandy Creek on July 1, one 27 in. the other 24 in.

—C. B. White, Fish Warden, New Wilmington, Pa., Mercer & Lawrence Counties.

Musky 14 lbs., Raymond Greene, 137 E. 35, Erie

7 Wall-eyes, between 7 and 8 lbs., Ed. Schnieder, 210 Holland, Erie

1—10 lbs. grasspike, Richard Cooney, 431 Poplar, Erie

1-8 lb. grasspike, Wm. Cooney

1—11 lb. musky, Ed. Cooney.

2—4 and 5 lbs grasspike, John Weber, 818 W. 4th St., Erie

2—8 and 9 lbs. grasspike, Jos. Quinn, 421 Parade, Erie

1—5 lb. smallmouth, Earl Demuling, 234 W. 4th, Erie

These fish were caught in Presque Isle Bay and Lake Erie.

—Edwin Hahn, Fish Warden, 138 Myrtle St., Erie, Pa., Erie County. There were quite a few smallmouth bass

There were quite a few smallmouth bass between 18 in. and 21 in. taken from the Perkiomen. One caught at Schwenksville last week 21 in. long, 4 lbs. 10 oz. Several nice ones were taken in the Neshaminy.

—Harry Z. Cole, Fish Warden, 877 Cherry Street, Norristown, Pa., Montgomery, Bucks Counties. I checked bass caught at President Henrys Bend, Oleopolis, Peaceful Valley, Rockmere, Reno Saint, George Kennerdell, Rockland Dotter, and Emlenton on the Allegheny River, that measured 18 to 20 inches. There were some nice wall-eyed pike taken at all of these eddies from 18 to 29 inches.

—Julius Ahrens, Fish Warden, Star Route, 3, Oil City, Pa., Venango County.

"FISHING BATTLE-FRONTS"



Smallmouth black bass caught by Myrl Crawford, taxidermist of Hanover. 24½ in. long, girth 16¾ in.

ROGERS LANDS RECORD SALMON

A Susquehanna River salmon measuring 30 inches in length and weighing eight pounds—hailed by anglers as a record catch was exhibited by E. A. "Doc" Rogers, of Hummel's Wharf, who landed the beautiful specimen at Wyalusing, on the North Branch of the Susquehanna.

The fish, which was viewed and acclaimed by numerous old time anglers from the Wyalusing section, was declared by them to be a catch such as is made once in a lifetime. No larger fish has been landed in that section in the past 14 years, it was declared.

Mr. Rogers was trolling when he hooked the monster salmon and he landed it only after a half hour's battle. The fish measured 15 inches in girth and 30 inches in length.

Among residents of the vicinity at Wyalusing at the time of the catch were Mrs. E. G. VanAlen, Bruce Weirick and family and Miss Sarah Bibby, all of Northumberland; Mr. and Mrs. E. A. Rogers and Miss Olivia Stanley, of Hummel's Wharf.





HARRY MANSBARGER CATCHES SIX-POUND BASS

"Fisherman's Luck" was with Harry Mansbarger, 795 West Chestnut Street, and Ward Lowe, 720 West Chestnut Street, as the local anglers sat along the bank at the No. 4 Dam of the Washington Citizens Water Company Saturday night.

Mansbarger pulled a bass from the water that measured 21½ inches in length and weighed six pounds, an unusual weight for a bass of that length. It measured 15 inches around the girth. A short time later he caught another one that was 12 inches long. Lowe's biggest catch measured 16 inches in length.



WHAT NEXT?

Here is a true story in detail dealing with a very odd and rather strange happening on one of our favorite streams in Pennsylvania, French Creek. Four friends and myself were fishing the favorite "Musky hole." on the second day of September and if you will check it you will find that the moon was full "of light." We started to plug about ten o'clock, and standing under the over-hanging Willow limbs, I had made my first cast across the pool where it is at least 100 feet wide. As my surface plug, about three inches long, white body, red head, with spinner back and front, hit the water, I noticed a large object rushing toward it. I did not retrieve it at once, but let the plug lay and waited until the object was but a foot or so away and then I carefully drew it toward me, as I did, there was a sudden splash and with a "bang" something grabbed the plug and I really mean grabbed it. I yanked pretty hard and the battle was on. My pulse began to leap and pound as I visualized hooking into what I thought was a big musky. Hearing the splash and commotion my friends came running up along the bank with flash lights and net, however, the light of the moon made the flash lights unnecessary. I really put the pressure on to get him started my way and finally had him within twenty feet of shore, when suddenly he decided to go to the bottom. At the point where we were standing the bank is about eight or ten feet high, so that we could look down on what was going on. To our utter amazement we discovered that I had tied into a full grown Beaver, what a disappointment! His home and the home of several more led under the bank just about where we were standing. A Beaver will eat fish and my plug must have fooled him when he swam near it and grabbed it. Not more than fifty feet from where this happened I made another cast and as my plug hit the water we heard a loud splash and commotion as another beaver smacked the water with his tail.

Now I know all fishermen are supposed to be liars, also I know that all liars are not fishermen, but believe me this is a true story witnessed by four good reputable men and I believe should be of interest to sportsmen in our State.

With every best wish to the staff of the Pennsylvania Angler, I am

Sincerely yours,

A. F. Pearson, Burgess, Rochester, Pa.

All fishing theories must remain theories because there is no way to check them. That is, you have no "normal" condition as a control, such as they have in scientific experiments.

Therefore, it is not wise to pin your faith entirely on a barometer, a water thermometer, the phases of the moon or any one such thing. Listen to the theorists and then, on the stream, just apply what practical knowledge you have picked up, plus the theory, and you will do all right.





LET'S GO OUTDOORS

with SLIM

-Lancaster Era.

An ichthyologist in Washington told John Price of Lancaster, that the carp ranks third as a food fish in the United States.

This may surprise those who favor wholesale destruction of the carp in our streams.

John asked a couple of Federal authorities about the teeth of a carp, and they didn't seem to know much about it, so they hauled out a specimen and performed a dissection.

They found the teeth in the lower part in back of the mouth, on each side, but no uppers. This set of molars caused much conjecture as to how they were used. One thought the food would be pressed against

the roof of the mouth with the teeth, thus crushing it somewhat.

However, after a lot of head scratching and examination, Price and the two specialists determined beyond a question of doubt that the teeth, which lay laterally, were brought together like two swinging doors, and simply ground the food, that passed through to its digestive tract.

After being told about this investigation, I asked an old carp fisherman whether a carp had teeth, and he answered very emphatically, "No."

Since its still tough to get around these days, carp fishing offers good pastime for fishermen. As one chap expressed his reaction after landing several carp in the Pequea Creek, "I never realized how much fun it is. They sure give you a tussle"

The favored bait for carp is "dough," made with 2/3 corn meal and 1 part flour and some sugar Mix and add water and knead it until it's like bread dough. Wrap in a cloth and boil it for at least a half hour, then remove and work it with your hands into a puddy-like consistency. This bait sticks to the hook, and does not wash off quickly, and guaranteed to bring home the "bacon," (we mean carp), according to the old timers.

SPORTSMEN'S BRIEFS

By Joe Elberson

The first fall bass stocking by the Pennsylvania Fish Commission occurred Sept. 9 when a Torresdale Hatchery truck delivered 1025 largemouth bass to Silver Lake. Nonewere legal size but they were all in excellent condition and a few of them measured six and seven inches.

In addition to the bass 500 large bluegills and four cans of adult catfish were also stocked in the Lake.

Including the bass stocking of last Fall the Lake has now received 2,225 largemouth bass from the Commission.

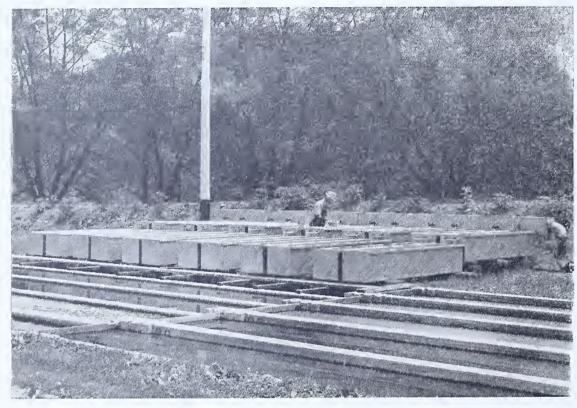
Because of labor shortages at the Torresdale Hatchery Superintendent John J. Wopart drove the truck to Bristol. The bass, he said were raised in ponds at the hatchery.

BLACK BASS CULTURE

AT THE

PENNSYLVANIA FISH FARMS

MONTHLY GLIMPSES INTO OUR MAMMOTH
FISH FARMING PROGRAM



Steel hatching troughs at Bellefonte. Actually a complete portable hatchery.

A battery of suspension baskets on the Pymatuning Sanctuary, used in handling and rearing baby bass.



"LETTERS TO THE EDITOR"

I would like to take out a five year subscription on your magazine commencing May 1944. Before this year is out I am returning to the old country and my forwarding address will be 17 Seafield, Eyemouth, Berwickshire, Scotland. I understand that postage will be extra therefore I would be grateful if you could let me know the amount of this subscription.

I will always treasure the memories of two week's vacation on Pine Creek, near Galeton, Potter County. Although you say Bellefonte, I think all of this state is an Angler's paradise and I most certainly wish to keep in touch with a fine society as the Pennsylvania Fish Commission. Perhaps if I ever return here some day I shouldn't be quite out of date. In closing I can only convey my heartfelt thanks to you all and wish you every success and colossal catches.

Yours for victory,
George Kemp, Warrant Officer,
Royal Air Force,
No. 1, B.A.S.D.,
Amber & Tioga Streets,
Philadelphia, 34, Pa.

JERRY DEIHL GETS HIS EEL

Sirs

On a hot July evening, along about ten o'clock as we were progressing nicely with a game of penny ante, who comes rapping on the door but our good friend Jerry Deihl, the fishingest man you ever saw, all beaming with excitement and saying "do you want to see something?" and of course we say "yes." Well, he says, come up to the cottage and see the large eel that I caught. Well, that was something new at Camp Sunshine, as no eel had been seen around there since 1936. So we went up and there it was forty two inches long and as thick as his arm. Jerry says "he's a Bachelor Eel" We said "Guess he is now but how did you get him" Well says Jerry "I was out there in the boat and felt something on the line and thought it was a Pickerel or something and when I pulled him in and saw what it was I was not prepared to land him and so I got him near the boat and then laid two stones on the line to hold him and ran up to the cottage and got the landing net and came back and dipped him into the boat but when he hit the bottom why he just shot up over my shoulder like lightning and so I jumped up on the bank and grabbed a club and smacked him. Boy, it was exciting for a while for it was already too dark to see just what one was doing. I'm going to skin him and soak him in soda water over-night. Come up tomorrow and have some." Thanks Jerry, we will.

> Good night Jerry Frank T. Custer, Jr.

"I've come to settle my account," said the long-term debtor. "Your last letter was a stinger—why, it would get money out of a stone!"

"Yes," smiled the tradesman, "I chose the best bits out of the letters my wife sends me."

CLUB ACTIVITIES

FRAZER SPORTSMEN REELECT DeQUINZE CLUB PRESIDENT

Frazer Township Sportsmen's Club, completing one of the most successful years in the history of the club, has elected officers for the coming year.

Otto G. DeQuinze was re-elected president and Floyd Rupert will be vice president. Other officers will be: secretary, Harry Wilhelm; treasurer, Harry Orris; delegate to Allegheny County Sportsmen's League, Clayton Cummings, and alternate delegate, Otto G. DeQuinze.

Directors for the coming year will be: William Wells, Frank Patis, Martin Korum, John Williamson, Gilbert Burkett and Peter Kutch.



Log deflectors provide hideouts for fish and resists stream-bank erosion.

SPORTSMEN TRAP SHOOT AND FLY CAST AT ANNUAL OUTING

Montgomery, Deleware and Philadelphia County sportsmen opened their Fall activities program with a meeting of the Lower Merion Rod and Gun Club, Wednesday night, September 20 in the American Legion Hall, Narberth, followed by the Club's annual picnic and outing on Sunday afternoon, at the Nash Farm on Sprague Road just outside of Narberth.

At the first Fall meeting of the Club's board of directors last Wednesday night, preliminary plans were made for the outing. In the absence of Field Captain Cappalonga of Narberth, who is in the service of his country, Earnest Jenkins, also of Narberth, volunteered to carry on.

Among the attractions at the outing were trap shooting, plug, fly and surf casting competition, games for the children and ladies who attended, prizes of War Stamps for all events and a tasty buffet toward the end of the afternoon's fun.

The outing committee is composed of the following officers, directors and committee chairmen of the Club:

Charles E. Spencer, Sr., Upper Darby; C. H. A. Chain, Sr., Narberth; Frank P. Davis, Philadelphia; Lloyd DuBois, Bala-Cynwyd; E. C. Criswold, Narberth; Philip Cappalonga, Field Captain, Narberth; Skeets Anderson, Philadelphia; John Albrecht, Jr., Narberth; Walter M. Johnston, Roxborough; Earl F. Moore, Narberth; George A. Purring, Narberth; J. J. Whiteside, Narberth; Charles Woodruff, Narberth; Walter P. Miesen, Narberth; Walter Groff, Narberth.

Victor Sweet, Ardmore; Thomas Johnson, South Ardmore; George M. Floyd, Sr., Narberth; Ernest Jenkins, Narberth; Frank Gorman, Ardmore; John A. Miller, Sr., Narberth; Ernest Bouley, Narberth; Howell and Ellen Dietrich, Upper Darby.

Ira J. Mills, supervisor of agricultural education at the Eastern State Penitentiary in Graterford, was the guest speaker at the September 20th meeting of the Club, and told the sportsmen just what comprises a day's activities at the Eastern State Penitentiary.

The education program at the Eastern State Penitentiary is of especial interest to the sportsmen, since part of the work consists of raising pheasants and trees which are annually distributed among the member clubs of the Montgomery County Federation of Sportsmen's Clubs to improve hunting and fishing conditions for the sportsmen.

It was reported at the Club's board of directors' meeting, that last week members of the Lower Merion Rod and Gun Club, including Victor Sweet of Ardmore, William Bullock of Upper Darby, Thomas Johnson of South Ardmore, and Samuel Arrel of Llanerch and Ellen Dietrich of Upper Darby, had aided Montgomery County Game Protector Ambrose Gerhart to release young hen pheasants which were raised this year at the Penitentiary.

Localized stream improvement offers excellent activities for sportsmens' organizations.

Trapping and holding water otherwise lost in its mad dash to the sea, serves to secure balanced water levels and an abundance of food and protection for game and food fish.

BUY BONDS

Deflectors used to shunt erosion in protection to a series of small dams. A fine type.



WHAT THE SPORTS-CASTERS ARE SAYING

REEL AND TRIGGER

By MORT WHITE

Allentown Chronicle

It is going to be pretty difficult for anyone who has not made it his life work, to serve as a substitute for Bob Glover in the writing of this column. Friend Bob has a great fund of knowledge, particularly in matters dealing with fish and fishing.

I am sure that many former readers of this column will be interested in knowing that his service with Uncle Sam's Coast Guard has not caused him to give up the sport. In his last letter, he advised the writer to sneak out to the Trexler Hatchery, lock up Clayt Breisch and his assistants in the pump house, and go to work on the brook trout pond with a Royal Coachman. That, says Robert, (C. R. Glover, S1c) will give us some idea of the kind of fishing he has had on three different occasions up to Aug. 1.

It appears that Bob is located in one of those out-of-the-way places in the northern hemisphere where Mother Nature's wonders have not often been visited by man. Fortunately, Bob had the tools with which to ply his trade, and we can be sure that in his first free moments from duty, he hunted himself a place to fish. He tells me, in confidence of course, that he is known as "Fishie" to his comrades. I am sure he doesn't mind that in the least. I am also sure that we would all like to sneak out with him on his next short leave. Right now he is probably trying to dope out a way to make a catch when winter closes down. I suspect that where Bob is located they have had the heat on in the hut for some time past. What a bundle of yarns he will be able to spin when he returns.

WOODLAND TRAILS

HUNTING—FISHING—OUTDOORS

Braddock Free Press

The management by the Fish Commission of the Pymatuning Lake Fish Hatchery has proved it knows how to deal in big figures—as is the common trend these days—by releasing more than two million wall-eyed pike fry in Crawford County fishing waters.

The tiny pike minnows, hatched from this spring's netting of big breeder wall-eyes from the upperlake "fish farm," have been dumped into the main Pymatuning Lake, Conneaut Lake, Canadohta Lake, French Creek and Oil Creek—and two tank-truck loads of adult pike were stocked in Conneaut Lake. The distribution was as follows, according to an announcement made by County Fish Warden Carlyle Cheldon of Conneautville.

"More than a million" in Pymatuning Lake; 400,000 in Conneaut Lake; 400,000 in French Creek; 250,000 in Canadohta Lake; 100,000 in Oil Creek.

The obvious remark at this stage is "that's a lot of fish fry." But we'll refrain, merely observing that this stocking program surely

should be all the evidence required to prove that the "fish farm" is a going concern, and that there is no lack of attention these days on the future fishing prospects of this country's best-known fishing waters.

WITH ROD AND LINE

Harrisburg Evening News

By CLYDE ROLLER

The Lebanon County Federation of Sportsmen's Clubs, which has been carrying on a lively program of activities for some time, has now expanded by adding another organization to the nine clubs which had previously belonged to the Federation. The new member is the Lebanon County Coonhunters' Association, which was organized in August.

also some obtained from Federal hatcheries will be stocked in Lebanon County waters if plans are carried through as expected. The Millcreek Rod and Gun Club has, for instance, placed an application for 10,000 fingerling trout to be obtained from Federal hatcheries with the intention of releasing the fish in the Newmanstown area. The Millcreek organization conducts a program for junior members as well as for senior members and it has sent to Harrisburg the names of ten boys who are eligible for the conservation Medal. The club has 134 adult members and seven junior members on its rolls.

With the small game hunting season due to begin before long, some mention of the Federation's activities in preparation for that season may be in order. An effort is now being made to induce Lebanon County residents to trap rabbits in places where it is not legal to hunt, such as within borough limits, for stocking on public hunting grounds.

Mr. Bachman of Division A of the Game



The Coonhunters' Club enrolled 37 members at its first meeting, at which C. LeRoy Firestone of Lexington, president of the Lancaster County Federated Sportsmen, served as chairman. Firestone is an ardent coonhunter and has several prize-winning coon hounds of his own. Officers of the Lebanon County Coonhunters' Association have now been chosen as follows: President, John Bachman, Palmyra; secretary, Charles Peters, Jonestown R. D. 2; and treasurer, Ralph Hemperly, Annville.

The regular meeting time of the club is the third Monday night of each month, and meetings are held at the American Legion Home in Annville.

Among the activities of the Lebanon County Federation this year has been the program of stocking Lebanon County waters with fish provided by the Board of Fish Commissioners of Pennsylvania. Chairman Theodore of the Federation's fish committee reported that 9,600 trout six inches or more in length; 36,700 fingerlings trout; 3,900 carp and a number of catfish and sunfish have been released. Also, more stocking is planned for this Fall, with distribution of catfish, bass and suckers being on the schedule.

Not only fish received from the State but

Commission, with offices in West Reading, has reported that 33,083 rabbits have been stocked in Pennsylvania since the hunting season of last year, those having been taken in box-traps or by driving. Of this number, 144 were taken in Lebanon County, and it is apparently the intention of the Federation to increase the bag of rabbits collected in the county for stocking. Sportsmen's clubs, Boy Scouts, 4-H clubs and folks in general who are interested in such a program are being urged to participate in an extensive trapping campaign.

Under one permit, it is explained, rabbits may be trapped and stocked wherever the organization believes the cover is satisfactory, if the site is open to public hunting. Under another permit the trapper will receive fifty cents from the Game Commission for each rabbit caught and turned over to the local game protector for use in stocking. In either case, the rabbits are stocked in the county in which they are caught.

BUY BONDS

OUTDOORS CALLING

IN WAKE OF THE BIG WIND By BILL WOLFE

Philadelphia Record

A few pilings, a bait house knocked askew and a general atmosphere of one of the invasion beachheads after a severe bombing are about all that remain of some of the betterknown New Jersey coast fishing

It is too early to evaluate the damage done to the ocean sports fishing industry (some of the boat owners are still hunting their boats) by the recent hurricane; but it didn't help it any. Fortunately, the big wind arrived after the main season was over and the men who depend upon their boats and piers for a living will have a winter in which to repair their equipment.

Most of the public fishing piers were damaged or destroyed. The average public fishing pier is a shade less substantial than one of the pyramids and given to rocking a bit even in an ordinary wind, so it isn't surprising that the combined action of a hurricane and abnormally high waves would crunch them up.

Apparently, one of the safest places during the height of the storm would have been in one of the fishing boats, or even one of the rowboats. It's true many of them broke loose from their moorings or dragged their anchors, but they followed the lines of least resistance and just rode the crest of the high water.

CAST UP. Since the water followed the streets in many instances, the boats went along, willy-nilly, and stopped wherever the water stopped. As a result, they are scattered on lawns or are nestled beside buildings. There are rowboats everywhere and it's going to be some time before the proper owners find and bring them back to what used to be their docks.

The gulls, terns and other cleanup birds have done a pretty good job of tidying up the beaches which were littered with clams, conches, fish and other marine life.

Surprisingly few fish were washed up any higher than what is normally the beach along the Jersey coast. The recession of the water from the streets left only debris, seaweed and sand. Small fishes suffered

Strangly enough, no fishermen were washed up like the small fishes. Fishermen are a stubborn breed and not given to heeding ordinary storm warnings. However, there is no known record of any angler trying to fish the surf and retreating step by step inland as the surf came up into the towns.

BOAT OWNERS. Boat owners whose craft were not damaged and who will continue in business the rest of the season would be doing themselves and me, too, a favor if they dropped a card here announcing how often (and from where) they are sailing. I have no idea how many fishing boats were put out of commission and no means of finding out quickly except by such direct aid.

Fishing was fair immediately before the storm and blues were plentiful in some outside sections. I understand that fishing, by some freak, improved immediately after the New England hurricane of some years back and the same may happen along the Jersey coast. It's hard telling what schools eame in close to shore, of what food was churned up to attract fish by the high water, or what new fishing grounds were opened by the action of the water on the inlets and sand bars. It's going to be interesting to find out.

FIELD AND STREAM

By R. E. ANGST

Pottsville Journal

Our mail lately has contained a number of letters like this one:

"In your Sept. 12 article you mentioned that if things were handled right Tumbling Run Dam could be opened for fishing.

"I am an ardent fisherman but as things are now with gas, tires, etc., it does not pay to go as often as one would like. If a place such as Tumbling Run was opened to fishing it would mean a lot to the anglers. I believe that the majority of them would be so well pleased that they would do anything to see that the privilege would not be jeopardized.

"It is a fact that a large number of fishermen would like to see Tumbling Run Dam opened."

For the benefit of the writer and others who have asked similar questions, let us state that there is at present no place where permits to fish Tumbling Run Dam may be obtained. Anyone who fishes there will be doing so illegally and will subject himself to arrest for trespass. The proper authorities to see about fishing in Tumbling Run Dam are known. A committee to see what can be done is being appointed. Everything possible to get this dam opened will be done. Progress is being made and things look favorable right now. Watch this column for further reports but don't expect action toc soon, certainly not this year any more.

With present shortage of fishing tackle an old effective form of fishing may again become popular. The method we used to take pickerel and one still practiced by many of the old timers, is called "skittering."

The equipment for skittering is a long bamboo or reed pole, a short line and a large hook baited with a minnow, frog, pork rind or gob of night-crawlers. The lure is dropped to the surface of the water, skittered along, then lifted and dropped again a few feet away. All the territory within reach of the rod is covered with the twitching movement. Old timers anchor themselves some distance from a weed bed and skitter their bait as near to it as is possible.

SPORTSMEN'S CORNER

By ROD GUNN

Lebanon News

Who said you can't catch carp with a plug? One was caught last week at Strack's Dam Garf Hottenstein, well-known local angling enthusiast.

Garf and Dick "Husky" Arnold were fishing in Straek's for bass. Garf was reeling in a small plug when he had what he thought was a vicious strike.

19

Try as he would, he couldn't budge the fish. In fact he had to yield line before he got the finny creature coming his way.

"Boy, this is the biggest bass yet," he cried in exultation. And was he surprised when after beaching the giant, he found it was a carp instead of a bass.

No the carp didn't strike. Garf snagged him in his dorsal fin. The fish weighed ten and a half pounds and was 29 inches long.

This catch brings up a question which has been troubling many sportsmen of late. Why are carp found in many waters which formerly abounded in the more worthy species of bass and pike?

Strack's, for instance, as an abode for bass and pike has been slipping fast the past several years. Fishermen didn't catch many bass there, but the Waltonites, especially those fishing at night, discovered that fish were jumping all over the dam. They couldn't understand why the "bass" wouldn't bite.

But early this season they learned the answer. A half drozen monster carp were washed over the overflow after a storm. That let the cat out of the bag and since then, carp fishermen have been flocking to the place in droves.

The significance of this story is that since carp have gotten into the dam, bass fishing fell off sharply.

While some schools of thought dispute the fact that carp ruin bass fishing by disturbing the spawn, those devoted to bass say it is true. However, there must be an answer to the question.

Sportsmen's organizations in the county which have done such a splendid job in the past should look into the matter and prepare their future programs accordingly.

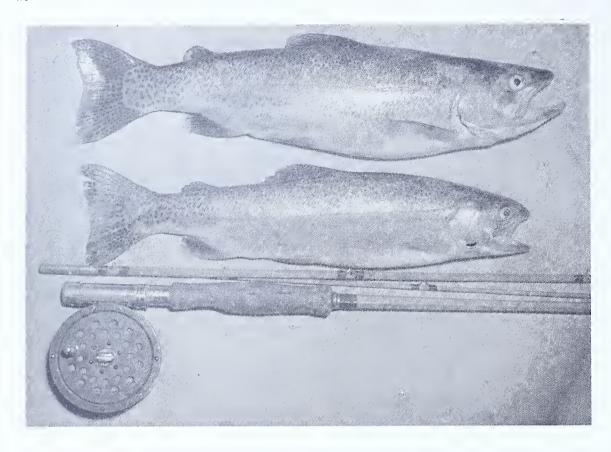
Sure, there should be some angling territory for those who prefer the mud-dwelling carp over the more glamorous bass. But the bass must be protected. There should be some streams and dams that are free entirely of the lowly carp, if it is determined definitely that they compete with bass for their existence.

How did the carp get in Strack's Dam?

As far as is known, they weren't stocked there by any official organization. Some of the fishermen interested in the topic believe that the carp may have been introduced by persons who caught carp somewhere else and then, keeping the fish alive, released them in Strack's. This would not be hard since carp live a long time out of water. And it is a known fact that this very thing happened at Stocver's Dam.

If that is so, some measures should be taken to put a stop to it. Strack's used to be the top bass and pike grounds in Lebanon County. Something must be done to bring the bass back.

Maybe now that the carp fishermen are really giving the place the business, enough carp will be caught to bring about a proper balance. But if the place continues to be devoid of bass even after large numbers of carp are caught, the dam should be drained and all carp removed. Then it should be restocked with bass and pike. There are plenty of other places for the carp anglers.



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WHY THE CATFISH HAS A FLAT HEAD

By BILL NOTLAW

1.

Once erpon er time in de long, long ergo, De catfish met de bullfrog a-settin' in his do' A puffin' out his ches' an a-singin' dis yer chune:

Room-a-diddi-room-juger-room, jigeroom.

2.

Now de catfish powaful jalous but he stroke his muftash

Den he wiggle his tail and he speak up mighty brash:

"Mista Bullfrog," he say, "why you make dat mawnfull moan?

Won't y' all please ter sing, instead er grumble an groan?"

3.

But de bullfrog he ain't pay no 'tention ter his talk

So de catfish wait er minute 'n den he up an squawk,

"Don' yer know it am er crime ter make dat orful soun',

'Cause yer frighten all de critters for mile an' mile aroun'?

4.

Den de bullfrog stop ersingin' an' he blink his golden eye.

Ker-blip! go his tongue an' he gobble up er fly.

Den he look at de catfish an' hop out de do' An' he scratch his off hin' leg as he speak deep an' slow:

5.

"You's po' trash an' you's jalous 'cause yer caint sing er note,

Fo' dey aint er scrap er music in yer no 'count froat.

When de white folks ketches catfish dey feeds 'em to de hawgs,

An' de niggers only eats 'em when dey caint git frogs."

6.

Den he hops into de worter right on de catfish back

An' he grabs up er rock an he hits em kersmack!

So he flatten out his haid and it stay dat-a-way,

An' it done spoil his beuty to dis bery day.

7

Mista Catfish mighty mad, an' he rip an' he

An' he 'low he stab be bullfrawg if he don't keep care;

He say he gwine ter sing an' drown de bullfrog's song

So he be mighty sorry befo' very long.

8.

Den he stretch his mouf wide, like er ol' houn' dawg,

But de bes' dat he could do, was to grunt like a hawg.

Den de bullfrog laugh an' he sing his little

Room-a-diddy-room, jug-er-rum, jig-er-

* Reprinted from the American Angler.

BUY BONDS!

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"I Came Through and I Shall Return"

—General MacArthur

WE MUST KEEP FAITH!

Just how the soldiers thoughts turn homeward is well evidenced by the following poem written in a fox hole in Italy, by one of the fraternity now serving the aims of civilization in the uniform of Uncle Sam.

The author Pfc. Wade H. Kinsey, Jr., hails from Ligonier, Pa., and we are indeed very grateful to his wife, Mrs. Kinsey, for this contribution.

PISCATOR'S PIPE-DREAM

In my memory I am wending
Where the hemlock trees are bending
Over water rushing madly down the stream;
Where the mounds of moss are growing
And the wild spring flowers showing
Vivid colors mocking any artist's dream.

Where the wind thru timber's humming
And the sturdy pheasants drumming
On a distant hill beneath a fleecy sky;
Where the wild teaberries flourish
And the cheerful song birds cherish
Their feathered nests on swinging branches high.

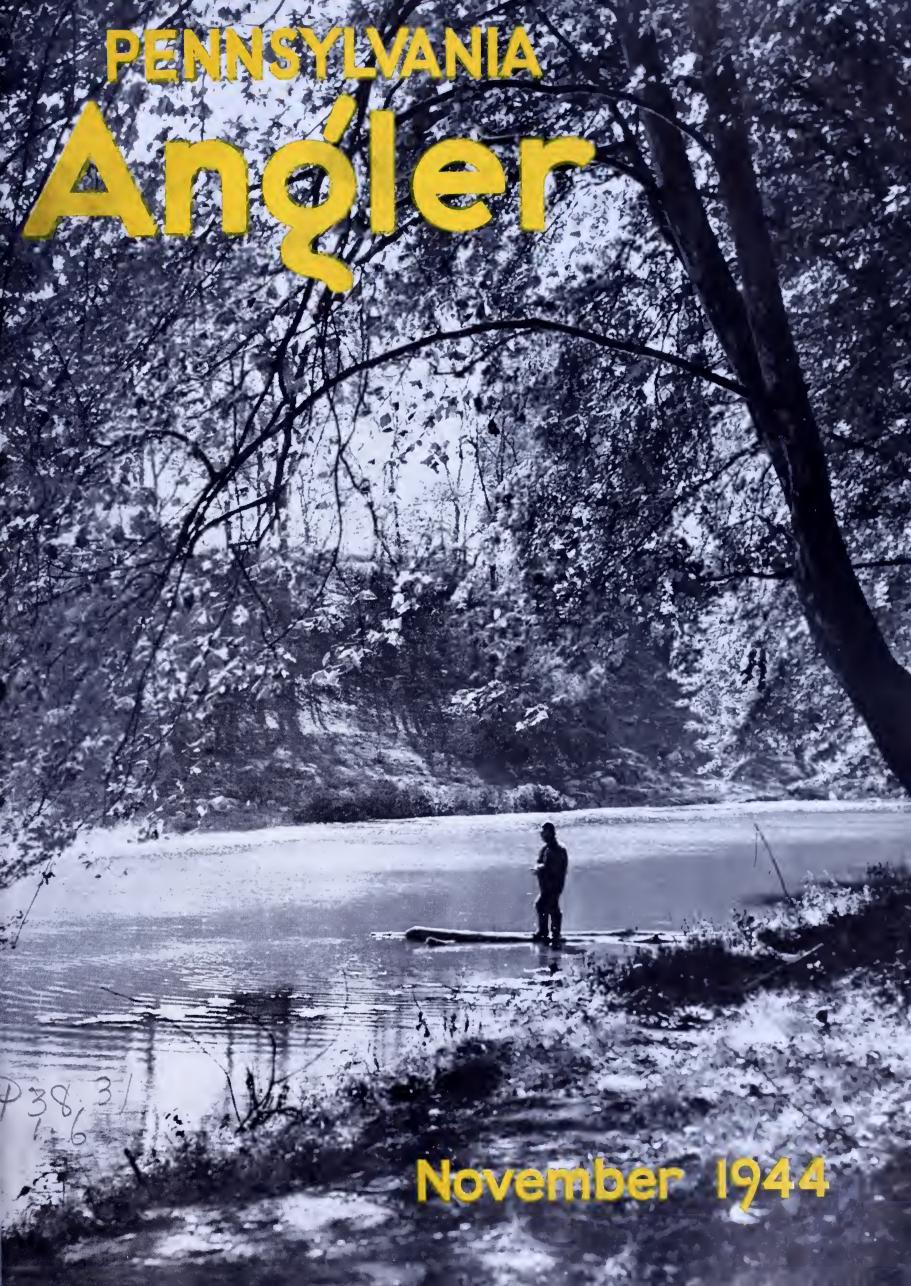
While my slender bamboo's casting Feathered lures, the trout are fasting, But I keep right on a-casting, casting still; And at last my heartbeats quicken As I hear my reel a-clickin' I am destined for a real old fashion thrill.

But there's really no use scheming
For I know I'm only dreaming
And my rod and reel and flies are packed away;
Still within my heart I'm yearning
And I pray I'll be returning
To fish my favorite streams another day.

My request herewith I'm giving
Someone keep that science living,
No such pleasant thing should ever cease to be;
I am wishing good luck for you
But my brethren, I implore you
Save a couple aged, wary trout for me!

By-PFC. Wade H. Kinsey, Jr.

We Must Get Them Back
BUY BONDS--Back the Attack





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EDWARD MARTIN

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COVER

"November—and a few last licks on Cumberland County's Conodoguinet."

Photo by MARTY J. MEYERS, Williams Grove, Pa.

In This Issue:

What Makes Fishing Tackle Standard?

By Lew Stoner

Deer Hair and the Fly-Tier
By Dick Fortney

Musky Madness By Leon H. Walter

Perhaps This is the Answer to the Question Why?

By Johnny Mock

Fish Commission to Buy Allentown Fish Farm

Stream Improvement

The Snapping Turtle as a Predator
By Harry Edward Miller

Diminishing Trout Streams

By Jack Richards

Teddy Was Just Like Dad By James W. Stuber

The Angler's Field Book
By Edson Leonard

Fish Commission Honor Roll

HOW DO YOU LIKE MY NEW COVER?

Yes, times do change and so does one's top coat. Well I've got my chin up too, for I certainly feel proud in my new dress and it is with pride and self-assurance that I again come to visit you this month and I hope for countless months and years in the future.

Bringing you the news of fishermen all over Pennsylvania, telling you, who they are and where they are catching 'em. Revealing to you the low-down in your Fish Commission. Inviting you to COME IN and share with me the happiness and pleasure of these monthly visits into the homes of thousands upon thousands of Pennsylvania sportsmen.

Yes, COME IN, and by that I mean YOUR OWN STORIES and PHOTOS; for without you and you and you, I just couldn't exist. I am what you make me and how I do want to make you proud of me. Your contributions, little stories, of actual experiences "out fishin." Your photos, scenes astream, catches etc.—all go into the hammering pounding press and bingo! Here I am.

I'll tell you what the clubs in our State are doing, what the sports-writers on our big city dailies are saying. What sportsmen in other states plan for the future. I'll transmit to you in word and picture the things I'm sure you are anxious to know. Then too, I shall always strive to let you in on new ideas and patterns in artificial lures and how its creator designs them to be used. This and much more too, all carefully selected and prepared. Timely, breezy! As much as can be crammed between any two covers.

So—"Come In" fisherman and help make me the greatest and finest monthly medium for the exchange of ideas, swapped stories, pictures, information, etc., etc., bigger and greater and better than ever before.

I hope you like my new cover. I am

Sincerely yours,

THE PENNSYLVANIA ANGLER

WHAT MAKES FISHING TACKLE "STANDARD"?

By LEW STONER

With a Prologue By William J. Ellis, Sr.

PROLOGUE

Several months ago I was a delegate to an association of casting clubs that was anticipating a tournament in the vicinity of Philadelphia. After the usual routine procedure as is customary at such meetings, they began talking about "rules for casting." Although the rules of the National Association covered the subject thoroughly, they decided to make a few of their own.

During the hectic and rather turbulent discussions that followed, one erudite individual made frequent use of the phrase "practical fishing tackle of standard manufacture." Now I have read the works of many reliable authorities on the subject of angling, and I know from experience that what one man will consider "practical" is looked upon as absurd by another. So, I became a little curious as to just what our loquacious friend had in mind, and ventured the question.

The answer was a veritable philippic depreciating the scientific angler, who devotes his spare time to research work for the benefit of his fellow sportsmen. The use of the word "scientific" was even discouraged on the grounds that it was "over the head" of the average fisherman . . . which is one of the most insulting remarks I've ever heard made about the deciples of Sir Isaac Walton. You may call a fisherman a liar and he'll probably agree with you, but to denounce him as a dumb-bell or a yokel is going to far.

These advocates of "standard tackle" continue to cry that they are trying to help the novice. Nuts! They're rationalizing. Let's analyze their true motive.

They're making a plea for the casting clubs to revert to the use of "run of mill" stuff that can be turned out at a much greater profit and still sell at a price anyone can afford. That's good business, but it doesn't help the sport. When someone builds a product of superior design, at the suggestion of a caster, it must sell at a price that requires explanation, or some proof of performance. Probably not such good business, but it's a step forward in the interest of angling. Should this product be branded as "special" and excluded from competitive casting events?

The casting court is indeed the laboratory of the tackle manufacturer. All real improvements in fishing tackle have been produced or suggested by members of casting clubs. Casting reels to-day are based on spool-weight and bearing area balance all of which was discovered by expert casters in an effort to establish new records.

Expert casters have found that they can obtain much greater distance by eliminating the modern level winding device. They are skilled in spooling their line without the



In surf casting a good many casters found the natural cane rod far better than the usual commercial grades.

aid of this little device. Don't they deserve some extra credit in acknowledgment of such skill? Apparently not, for they are asked to sacrifice footage in all distance events by using this little gadget.

On the other hand, several manufacturers have recognized the value of "free spooling" on casting reels, but these same advocates of level winding are condemning a device that is a distinct aid to all distance casters. Don't ask me, "Why?" I don't know. But, I do know that it's discrimination of the worst kind, and will eventually ruin the sport.

Mr. Stoner's article which follows this brief prologue completely debunks the entire theory of "practical fishing tackle of standard manufacture" as a "must" in competitive casting. He shows how close relationship with the expert tournament casters has enabled him to build a casting rod that bears a most enviable reputation.

When Harlan Major of New York published his "Salt Water Fishing Tackle" several years ago, he devoted the greater part of an entire chapter to his meeting with Stoner while in California. Credit is given him for revolutionizing the entire technique of rod-making, and helping many a caster climb right up to the top. He is



The casting court is the best place for information about tackle . . where it is put to the real test.

one of the most optimistic and progressive anglers of the age, and by carefully analyzing competitive casting and sport-fishing from every angle, Lew Stoner has become one of our best authorities on the subject.

The biographical sketch given in the first paragraphs of his article could be expanded into a "best seller," if Lew chose to write it. Instead, he has given the space to a subject that looms on the angler's horizon as a menace to all future development.

I. LET'S GET ACQUAINTED

Newspapers and magazines frequently print notices about new casting clubs being organized, and in many instances they embody the statement that its casters will be limited to the use of practical fishing tackle. Sometimes the words "standard fishing tackle" are used. Restrictions of this kind should not be adopted too hastily, so, in the interest of tournament casting and good sportsmanship, I feel justified to make some comment.

First, however, I am going to give the readers of the Pennsylvania Angler a short sketch of my background, so that they may judge my qualifications. Most of my sixty-odd years have been spent fishing, and it was at the age of thirteen that I made my first fishing rod. After that I was always making and repairing them for myself and my friends.

My first rods were made of wood. From this I progressed to rods of cane. By this time my avocation and hobby had developed into a home industry, which it remained for many years. During this time I never solicited an order.

A typical instance of how orders came to me was when my door-bell rang at dawn one morning. I answered it. A man for whom I had made a fly rod several years before pressed a roll of bills into my hand and in breathless haste said: "That rod of mine got smashed to pieces in an accident, and I've driven all night to ask you to make me another as soon as possible."

He was operator of a power-generation plant, away out in the mountains, where his only recreation was fishing. He said that he got so many more fish on that rod, that no other kind could be considered, even if it took him a month to get another.

Later in life I found myself making rods to the exclusion of everything else save of new tools and machines to aid in their making. Endless experiment on construction and design did much to build up a real business, under the name "R. L. Winston Rod Company." The name was coined from a part of my own name and part of that of my first partner, Robert Winther.

Right from the start we were sought by casters who wanted rods that would win meets for them. This was a break for us because having our rods used by the best casters would prove their worth and also bring us constructive criticism on their faults. So, we gladly cooperated, even though it involved an expenditure of time which we could have given, with far greater profit, to regular manufacture.

This close relationship with casters and casting continued until "World War Two" compelled the temporary cessation of our business. In the years it continued, we made



 $M^{\alpha}ny$ casting clubs have a private pool in which the members may cast.

The annual tournament of the Dover Fishing Club of Philadelphia is conducted under rules that encourage research work by scientific anglers.



rods that set all present records for distance casting in both fresh and salt water events. We also did a lot of research work in the development of better reels, and in a large measure, acted as a clearing house of information through which any new discovery related to equipment or methods was passed along to casters.

II. PROHIBITING DEVELOPMENT

With this premise, I now ask you: What is standard tackle?

To the average club it means, "Tackle that anyone can buy in any sporting-goods store, at a price anyone can afford." They believe that this will make it easy for anyone to cast at their club, and increase their membership. Members will save a lot of money and all be on an equal footing with regard to the winning of events and prizes. In some vague way, they believe that such tackle is fit for fishing, and that anything made especially for use in tournaments will

be useless on the beaches or streams. Some will even tell you that the tricks of tournament casting are of no aid in catching more fish

These are all false assumptions. First, the cqual footing illusion is exploded by the fact that a good caster will take the poorest rod to be found at a club, and defeat all and sundry who do not closely approach him in ability and skill. Second, the basis of all casting competition is either distance or accuracy of cast, and these are the same primary requisites of successful fishing, with the possible exception of deep-sea game fishing.

A third factor enters into competitive casting, which I will call "delicacy." In trout waters where the fish are wary, the prime requisites are accuracy and delicacy. Distance is a great help in surf fishing, in fly fishing lakes of trout or bass, and in steelhead and salmon fly fishing. In plugging

(Turn to page 15)

DEER HAIR AND THE FLY-TIER

Material for All Kinds of Lures for All Kinds of Angling for All Species of Fish Comes From the Buck

By DICK FORTNEY



Dick Fortney

In THE quiet darkness of the summer night I became suddenly aware of the fact that I was not alone. In the process of knotting a new bassbug to the leader, and standing quietly lest surface-feeding bass across the rather narrow pool be disturbed, I caught the sound of a gentle splashing so as no fish could make.

Then came the unmistakable snort of a deer that had drawn water into its nostrils while drinking at the side of the stream, and a rattle on the stones as the animal shifted its feet.

The flashlight beam outlined a magnificent sight. A huge buck deer stood at the water's edge, his head and majestic antlers erect, his feet planted wide, his ears cocked forward. So long as the light held him in its glare the buck stood still as a statue, but when a click of the switch enveloped the scene in darkness again the animal fled into the thick woods at his back.

Mention of the incident is pertinent—

Mention of the incident is pertinent—because the buck deer has in recent years provided the fisherman a superb material from which all kinds of angling lures can be made and has, in fact, become a major source of supply for the fly-tier.

All kinds of lures for all kinds of fishing in pursuit of all species of fish can and are being made of deer hair, and the material is proving a completely satisfactory substitute for the more expensive and rarer materials which it is replacing.

Bugs, frogs, and large flies made of deer hair are favorites among bass anglers. They are unusually buggy and natural in appearance, they are durable, and they are excellent floaters.

Larger sizes of trout dry flies, popular in the final weeks of the trout season, are made of deer hair, the natural color, of the material closely imitating the hues of insects which are abroad at this season of the year, and the deer hair fly proving to be superior in floating quality to those composed of feathers and fur.

Deer hair is one of the main materials in the construction of nymphs, and without deer hair streamers and bucktails would never have reached the high stage of effectiveness for which they are noted.

Hair of the deer, also, finds many effec-

tive uses in construction of flies of other materials, imitating legs and wings of insects. The mottled brown deer hair wing, I feel sure, is one of the most effective features of the Midget Streamer, which another writer introduced in the columns of this magazine in the spring of 1944. Deer hair is used generally, as well, in construction of wings and tails on bass bugs having cork or balsa wood bodies.

Deer hair falls roughly into two classifications:

1. The hair of the tail, which is the longest on the deer's body and of a rather silky nature.

2. Hair from the body of the deer, which is shorter but hollow and rather brittle.

Hair from the tail is used in streamers and bucktails, where its flexible nature makes it ideal for giving the illusion of life-like motion in the lure. Body hair is best suited for tying and clipping, as in the body of a bassbug, because when it is tied to the shank of a hook it breaks and fans out around the hook.

Close examination of a deer hide will reveal four natural colors in the hair—white, light gray, light tan, and brown. (It may require a good washing, however, to bring out the pure white sections).

Deer hair can be dyed any color of the rainbow, and in passing it is worth noting that dyed deer hair is so inexpensive that it scarcely is worth while for the amateur to attempt to, color his own. But where possible it is a good plan to use hair of the natural colors, since dying for some reason or other seems to make the hair soft and hard to handle, particularly in the case of the hollow body hair.

The angler who has a friend who hunts should have no trouble in obtaining his own supply of deer hair. And keep in mind the fact that a good many dozen flies can be made from the hair off a block of deer skin a foot square.

First, examine the hide carefully, choosing the particular type and color of hair desired. Then cut out pieces as large as you wish to preserve. With a dull knife carefully scrape the excess fat and flesh from the inside of the skin, being careful, however, not to cut through the hide.

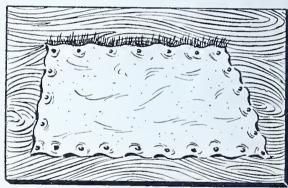
Place the block of skin, hair side down, on a piece of wood; drive a row of tacks down one side, then stretch the hide and nail the opposite sides. Repeat the process with the ends. Like laying a carpet! Make sure the skin is perfectly flat and stretched well, for the position in which it is tacked to the board is the position in which it will dry.

Once the tacking has been completed, rub generous quantities of salt into the flesh

side, continuing the process until the whole skin feels rough and gritty to the fingers.

Then simply put the stretched skin on its board in some spot where mice and moths cannot get at it—and forget it for a couple of months. Finally, when the skin is dry and hard, remove it from the board, cut it into pieces of convenient size, and store it in envelopes containing a moth preventive until you wish to use it. In cutting, by the way, use a sharp razor blade and cut from the flesh side.

And be sure about those moth crystals! Preparation of a deer tail is equally simple. The bone should be removed, by splitting the tail with a sharp-pointed knife, and the tail then simply hung up to dry. The flesh will



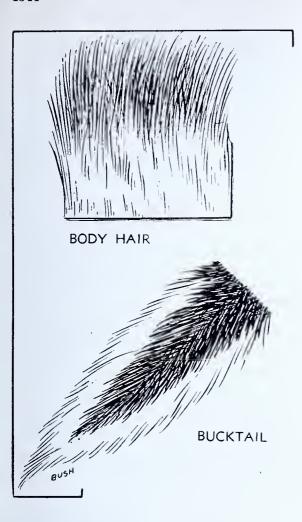
HOW SKIN IS TACKED TO BOARD

curl as it dries, but the hair still can easily be clipped from the skin. Like pieces of body hair, the dried tail should be kept in an air-tight container with a generous supply of crystals to keep out the moths.

It is impossible to go into the subject of constructing various angling lures of deer hair within the space allotted to this article, but there are some general suggestions which will help to make the work of the fly maker more easy when this material is being used.

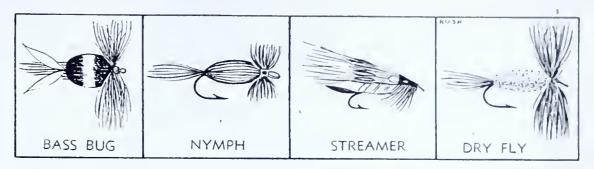
1. In tying hollow deer hair in the making of bassbug bodies, bind the hair to the hook with size C thread that has NOT been waxed. The unwaxed thread will enable the hair to slip and turn more easily about the shank of the hook as it breaks and fans out under pressure. In fact, the whole lure can be made with unwaxed thread, provided a liberal coating of cement is applied to the head to finish the lure. It is good, also, to cement the first wrapping of the thread on the hook so that it holds firmly.

2. In using any kind of deer hair, brush out with the fingertips the short hairs which will be clipped off with the long hairs next to the skin. These short hairs, and in some cases a fuzzy, silky kind of hair right next to the skin, serve no purpose in the com-



pleted fly, and they are inclined to make the tying process more difficult.

- 3. Do not try to make bug bodies out of hair from the tail, for the tail hair will not bend and fan out under pressure. It is too silky. At the same time, body hair is not the best for streamers and bucktails. It is too short and brittle.
- 4. Use a pair of sharp manicure scissors with curved blades to clip the hair from the skin. With them it is possible to get right down against the hide and thus to take advantage of the full length of the hair.
- 5. Do not tamper with the natural arrangement of the deer hair—and, above all, do not clip the ends of deer hair used as wings, legs, or tails. You cannot improve on the natural taper which nature has imparted to a hair from any part of the body of a deer. To make a neat job, however, it is advisable to bunch clipped hair so that the tapered ends are even. Clipping the hair from the hide disarranges the ends.
- 6. It is not necessary to take special pains in fashioning a tail on a deer hair bug. The first gob of hair tied to the hook will fan out in all directions, and it is always possible to let enough of this hair in place at its full length to make the tail of the lure.
- 7. It is not necessary, either, to go through the painful task of tying special wings on a hair bug. Instead, wrap in the final three or four bunches of hair as near to the bottom of the hairs as possible, so that the longest possible area of the hair will fan out around the hook. Then, in shaping the bug with seissors, let bunches of these longer hairs project from either side, just back of the head, to form the wings.
- 8. I recommend at least an eighth of an inch between the eye of the hook and the front of the deer hair body. Then, if you ever have to tie a deer hair bug to a leader



in darkness, the job of finding the eye of the hook will be comparatively simple.

- 9. Make a deer hair body compact by pushing each bunch of hair that is tied to the hook firmly back against the hair that has been previously attached. But if you would avoid breaking the hook, take a firm hold on it, at the end, with one hand while packing the hair back with the other. Only in this way will a compact, strong body be constructed.
- 10. It is easy to get stripes in the body of a hair bug. Suppose a gray bug is being tied. Apply three bunches of gray hair, then two of black, then three more of gray, then more black until the body is completed. When clipped the body will be gray with black stripes.
- 11. The final appearance of the hair bug depends as much on the barbering of the deer hair as much as on any other element of the tying. When the bug's first construction stage is reached it will be just a big mass of hairs sticking out in all directions. Hold the bend of the hook in one hand, with the point down, and with thin-pointed scissors cut a lane back through the hair from the head to the tail, cutting down into the hair deeply enough that it feels solid under the blades.

Turn the lure upside down and repeat the process.

Then, starting back far enough that hair will remain uncut to form the wings, trim off the excess hair around the body. You can taper the body if you wish, letting its narrowest point be at the bend of the hook.

At this stage, you will have a lure with a close-cropped body and a fan of hair just back of the eye, divided into two fanshaped wings by portions that have been cut out of the top and the bottom. The final job is to trim down these wings to the desired size, taking off only a little hair at a time and being careful to make both wings the same size and in the same angle to the rest of the body.

Once this is done, a liberal application of finishing cement at the head of the bug completes the job.

12. Hook clearance is essential. Trim the belly of a hair bug as closely as you can force the scissors into the hair. A quarter inch clearance between the bottom of the fly and the hook point is essential. Half an inch is not too much. If you can't get at least a quarter inch, larger sizes of hooks should be used.

(And don't be discouraged if the finished bug is kind of ragged in appearance. For some reason, bass like a bug that looks battered and juicy. After all, the way you have handled it, you can't expect hair on a fishing lure to look as neat and beautiful as it does on the body of the noble animal that supplies it).



Bowfish From the Slippery Rock!

The above monstrosity was caught in Slippery Rock Creek September 8th, near Heinz House Camp, by John J. Vogler and measured 31 inches long and weighed 9½ pounds.

The photo was sent to The Angler by C. B. White, Fish Warden, located in New Wilmington, Lawrence County, with a notation "Information Please!"

For the information of Mr. Vogler and sportsmen generally, this fish is known as the Bowfish (Amiidae) and is native to the waters of Lake Erie and the Ohio River Basin in Allegheny County. It is found in many waters throughout the United States and Europe and is known by various common names, among which we find: Bowfish, Scaled Ling, Dogfish, Grindle Fish, Mudfish, while in France it is known as Poisson de Marais. It is of peculiar interest to zoologists as the remains of an ancient stock of fishes and is the only surviving species in the whole order to which it belongs. Its habits however, render it a nuisance as it is carnivorous and very voracious.

The Bowfish is an extreme predator and when caught by fishermen should never be returned to the water. It lives, it seems, just to kill and will seize the head of other fishes and crush it in its strong jaws, just for the fun of killing.

(The references in this explanation have been lifted from Lake Maxikuckee, a physical and biological survey, and a List of the Fishes Recorded from Pennsylvania, by Henry W. Fowler and from the files of Dr. Glenn V. Brown, Consultant to the Pennsylvania Fish Commission.)

1944 NATIONAL CHAMPIONS

Thirty-sixth Annual National Fly and Bait Casting Tournament St. Louis, Missouri-August 25, 26, 27, 1944

---NAACC---

Salmon Fly Distance Fly 3's oz. Bait 5's oz. Bait	Distance Events Robert Piros, Sr., St. Louis, Mo. Marvin K. Hedge, Pordand, Ore. Tony Accetta, Cleveland, Ohio Charles Schall, St. Louis, Mo.	Average 186½ ft. 170 ft. 333½ ft. 395½ ft.	Long Cast 192 ft.* 172 ft. 338 ft. 400 ft.
Dry Fly Wet Fly 3/8 oz. Bait 5/8 oz. Bait	Accuracy Events Harold H. Smedley. Muskegon, Mich. William Morris, St. Louis, Mo. Earl Osten, St. Louis, Mo. Richard Fujita, Cleveland, Ohio	Score 99 100 97 99	
Dry Fly Wet Fly 3'a oz. Bait 5'e oz. Bait	Ladies Accuracy Events Joan Salvato, Paterson, N. J. Carol Steel, Chicago, Ill. Mrs. Harry McDonald, Chicago, Ill. Mrs. Ott Reisman, Kansas City, Mo.	88 99 99 96	
Dry Fly Wet Fly 3's oz. Bait 5's oz. Bait	Junior Accuracy Events Dorothy Vogel, Paterson, N. J. Dorothy Vogel, Paterson, N. J. Charles Sutphin, Indianapolis, Ind. Paul Brewer, Chicago, Ill.	91 98 95 96	
Men's Bait Men's Fly	Skish Events George Wolters, St. Louis, Mo	69 154	
Ladies Bait Ladies Fly	Mrs. Harry McDonald, Chicago, Ill	53 109	
Junior Bait Junior Fly	Charles Sutphin, Indianapolis, Ind	63 129	
% oz. Bait	Team Event St. Louis Fly and Bait Casting Club* * New world's record.	466	

From the BUSINESS MEETING

At the Thirty-sixth Meeting of the NAACC the following Resolutions and Endorsements were adopted: ENDORSEMENT

WHEREAS, the Internal Revenue provisions of the Federal Code, Title 26, Section 3406. covering excise taxes, imposes by the Revenue Act of 1941, sub-section 1, a 10% tax on "fishing rods, creels reels and artificial lures, baits and flies," which tax is commonly known and referred to as a Defense Tax; and

WHEREAS, the Outdoor Writers Association of America at Columbus, Ohio in February of 1944 passed a resolution asking for a repeal of such tax and the enactment, in its place of a Pitiman-Robertson type law on the same items of angling equipment but with the specific provisions that all of the tax money be available the following year; and

WHEREAS, that same resolution was adopted at the 22nd Annual Conference of the Izaak Walton League in Chicago on April 1, 1944;

Therefore, the National Association of Angling and Casting Clubs does hereby endorse both the resolutions referred to above. Be it further resolved that copies of this Resolution be sent to the Outdoor Writers Association

of America and the Izaak Walton League of America.

Be it further resolved that copies of this Resolution be transmitted to The American Fisheries Society and the International Association of Fish and Game Commissioners who will hold their annual meetings in Chicago in September, 1944.

Be it further resolved that this Association lend its effort to obtain the enactment of such legislation.

RESOLUTION

Father and Son Angling and Casting.

WHEREAS, the Izaak Walton League of America has recently gone on record resolving "that the second Sunday following our National Holiday, July Fourth, be set aside as our National Father and Son Fishing and Outing Day;" and

WHEREAS, our Association does hereby endorse the thought and realize the responsibilities of that wise resolution;

BE IT RESOLVED that the National Association of Angling and Casting Clubs does hereby endorse the purport of that resolution, setting such Father and Son Day and does hereby set the second Sunday following our National Holiday, July Fourth, as the NAACC's Father and Son Angling and Casting Day; and

BE IT FURTHER RESOLVED that the member clubs, in arranging their plans and meetings each year, will take special cognizance of this resolution and in their programs, make provisions for such a day.

RESOLUTION

Identifying Items of Equipment

WHEREAS, it was E.R. LETTERMAN of Chicago, Illinois, who in 1904 designed and made the first official aluminum bait casting plug which is still used as the official plug in our Association; and

WHEREAS, it was E. H. Burlingame of Chicago, Illinois who in 1931 designed and made the first official metal tipped wood casting plug which is still used as the official plug in our Association; and

WHEREAS, it was John H. Burdick of Muskegon, Michigan who in 1934 designed and made the first official aluminum target which is still used as official in our Association.

BE IT RESOLVED that from now on, and whenever reference is made to those items of equipment that they be identified and referred to by using the name of the respective originators. Permission to reprint granted by National Ass'n of Angling and Casting Clubs

TEDDY WAS JUST LIKE DAD

By JAMES W. STUBER

Sportsmen of America have lost a noble character from their ranks. Conservation lost a great champion, when Gen. Theodore Roosevelt died from over exertion and heart attack on the battle front in Normandy. "Ted" literally died "with his boots on" as those of us who knew him well, always said he would.

Many years ago in New York in bygone days of the American Game Association I was privileged to be associated closely with him. He spoke of himself and the writer, as the "cubs" of the Old Timers' group in wildlife conservation circles. Older men were John B. Burnham; John M. Phillips; Carl Avery; Frederick C. Walcott: Dr. W. T. Hornaday; George Shiras III; Bill Mershaum of Michigan; Bill Finley of Oregon, and others who devoted themselves to organization work in behalf of conservation of American wildlife resources.

To those of us who knew him through the years, he was always "Ted" and still "Colonel" Roosevelt to us. His friends in the Outdoor Writers Association of America of which he was a life member, although he was a "General" still called him Colonel Roosevelt.

A true aristocrat, he was as common as an old shoe. He never high-hatted anybody. I met him at the train in Columbus a few years ago when he came to spend a day with John W. Bricker, then attorney general. "Ted" was enroute at the time to Central America on a jaguar hunt. He got off the train wearing a battered old hat, a suit that looked like it had been slept in and unpolished Army shoes. I recall him, when I was his guest at the Harvard Club in New York, as he sat on a bench in a cubby hole, with his feet tucked under him, dressed in a wrinkled soft boiled shirt and wearing Army shoes . . . the kind a private wears. He liked to hike and to fish in them. He was like that with his soldiers over-seas, sharing all their hardships and dangers, both in the last war and in this one. He was wounded severely in World War I and walked with a considerable limp. He was scarred by battle and had a "busted" nose but always the characteristic Roosevelt merriment and grin. He believed in the strenuous life and that is how he died, waging war beyond his strength. "Ted" was of slight build not over five feet seven. He was never as husky as his father.

I treasure the memory of hours I was privileged to spend with him talking national programs in wildlife conservation, big game hunting, duck shooting, trout and bass fishing—we had a date to go trout fishing, after the war, in the Catoctin Mountainsand he was always planning and talking the need for conservation of natural resources and wildlife restoration as a part of our Americanism program. He abhorred the pinkish hued brand of Americanism and communistic trends. He deplored all "isms" except true Americanism. That was "Ted" as we knew him in outdoor writers circles and at conservation meetings.

He wrote me from Africa when the campaign was on there saying, "We've got 'em

(Turn to page 20)

MUSKY MADNESS

By LEON H. WALTER

Editorial Note: The short, short "Musky Madness" is one of twelve original stories with a woodsy tang and unexpected endings, written and published by Leon H. Walter formerly of Pennsylvania. The volume entitled—"Outdoor Chuckles" is well worth its nominal cost.

Some twenty pages of well written words of humor about fishing, hunting and trapping, beautifully presented and holding a charm of humor to the outdoorsmen of America.

To—Leon H. Walter, 564 Madison Ave., Akron (2), Ohio—we extend our best wishes for success.

J. A. B.

WHEN things are going all right around the house and it's raining and Ed laughs, I don't mind it.

When things are not going so good around the house and it's raining and Ed laughs, I get musky madness.

That musky madness is something special that happened to me the time I got tangled up in a matrimonial line and got hooked and landed.

Up Oil Creek above Titusville is a quiet, deep stretch of stump studded stream known as Mystic Park and it's one of the best muscallonge spots in northwestern Pennsylvania. Some pretty husky muskies leave there each year on stringers.

There are a lot of cottages along both sides of the stream and people from all parts of Pennsylvania and Ohio come there to spend a few days or weeks in the summer. On one side of the creek the cottages are on a wooded hillside overlooking the stream with some of the front porches nearly over the water.

One afternoon I had some spare time and had several large horned dace in the live box so I decided to do some live bait fishing for lunge at Mystic Park. Arriving there the only boat I could get was from a farmer who lived nearby. He gave me a special cash rate, as he said the boat leaked some. He also gave me a lard bucket to bail with, which I thought was nice of him, but which should have served as a warning.

I started out with that boat and soon decided that the termites must have had a convention there the way the water poured through the bottom. It was like riding on a sieve with sides. But I was so darned anxious to fish that I stayed on the stream anyhow, put on a big chub, fastened a large cork up the line a ways to keep the bait off the bottom and started to troll for lunge.

Pretty soon I got tired of bailing and rowing and anchored in a nice, deep spot in front of a cottage where there was a big man on the porch reading. It got kind of dark and stormy looking and the wind came up a little. Right then I figured that it was just right to catch a musky, as they seem

to like rough water better than calm for feeding.

That cork of mine had been riding peacefully down stream—all of a sudden it started up creek. Then it plopped under and kept traveling around. Then it came up again and went downstream. Then it started to rain and the water came down so fast I was soaked in no time.

Now I know that if you try to hook a musky when he first strikes you just lose your chances of a catch. You have to let them play with the minnow until they break water. Sometimes it takes as long as 15 or 20 minutes for them to hook themselves with live bait. Meanwhile you jam your hands down hard in your pockets, sit on them or do anything else that will keep you from grabbing the pole and trying to set the hook.

The suspense is awful. The feeling is something like putting a cactus hot water bottle on a carbuncle. It's like poking a sore tooth to see if it still hurts or how close you can bring an electric fan to a moustache before something happens. It's the same kind of a tingle you get out of shaking hands with a porcupine.

That cork kept traveling around, the rain kept coming down, and the boat kept filling up. I was afraid to bail for fear the musky would jump when I had the pail in my hands and I would lose the chance to hook him. That big fat man on the porch had quit reading and was watching me and the cork now.

The water in the boat was getting pretty close to the seats and I had just about decided to try and snag that musky anyhow when the line straightened out all of a sudden and he came to the top himself. It was raining so hard I couldn't get a good look at him. I struck and felt that surging kick on the other end of the line which means that I had him.

He came into the boat pretty easy and I flopped him over the side into the boat. He had darn near as much water in the boat as he had in the creek so I had quite a time keeping a tight line on him, keeping him out from under the seats, clear of the anchor chain, tackle box and other implements. Finally I got my hands around him.

While I was unhooking the fish that big man on the porch leaned over the railing and started a kind of booming laugh that startled me at first. And then he hollered: "Thow him back; he's too little."

I didn't answer him, but I put the tape on that fish and he was only 20 inches instead of the 22 inch minimum the law required. And that big fellow kept laughing and saying, "Thow him back; he's too little." So I dropped that musky over the side and he disappeared like a flash.

And it kept raining, and I saw the boat was nearly under. I was wet, mad and disappointed. That laugh began to grate on me like a canoe bottom grounded on glass.

Then I looked up at that big fellow and said; "How do you know so star-spangled much about that fish anyhow?"

He said, "That's the same one I caught right there last week, he's only 20 inches long." And then he said, "come on up, pal, and have a warm cup of coffee and you will feel better."

So I went up on the porch as soon as I could drag that boat full of water over to the bank. And the big man said, "My name's Ed and I live in Pittsburgh." So I told him who I was and started to wring out some of my clothes. And then he hollered: "Hey, girls, is there some hot coffee ready?"

Just then the door pushed open and out came the nicest lure that ever flashed in front of a fisherman. It was a female of the human species with wobble, shape, color and everything. I was hooked with a splash.

Ed said, "This is my wife's sister Kitty," and I mumbled something while my rain soaked clothes dripped puddles on the porch floor.

Kitty says, "Come on in, boys, and have supper," and I automatically followed after her like a musky trails a spinner. I guess I ate something and drank coffee but I was more busy drinking in every word and gesture of Kitty. I didn't realize it then but she knew she had a nibble and was trolling with care.

We had hardly finished supper before visitors started to arrive. It seems that Kitty was especially effective as a night lure and all the men up and down Mystic Park found some excuse for dropping into Ed's cottage.

A lot of those birds were dressed for fishing but they all had excuses for not being out on the stream. Some said the rain had spoiled chances of a catch, others said there were too many mosquitos. One fellow even claimed he had caught his limit for the day. Another fellow had to stop and have Ed try some of his favorite pipe tobacco.

But there were so many visitors that none got any special favors from Kitty. I pretended I was waiting for my clothes to dry and stuck it out until I had a chance to ask Kitty if I could come back again the next afternoon. She gave me a coy, "Yes," for an answer, probably wanting to give me a second run so she could set the hooks. Or maybe she just wanted to see what I would look like in dry clothing.

Anyhow I started to go to Mystic Park pretty often, and when Ed and the Mrs. and Kitty left the cottage the first thing I knew I found myself going to Pittsburgh to see them. And the next thing I knew I wasn't going at all—just being reeled in. And soon after that Kitty put the net over me and I was creeled. Just another canned fish in the sea of matrimony.

Sometimes it's all right and then again it isn't—you know how it is. Ed visits us quite often and as I said before when he laughs and it's raining and things are going right I don't mind. But when I am kicking against the creel and it's raining and he laughs like he did that day at Mystic Park I get musky madness.

(Next page)

P. S. I'm going back after that musky this season, he ought to be plenty big enough now. When I get him I'm going to mount him for the den. When he hangs in view Ed can laugh all he wants to and I won't care. But when that musky is turned to the wall it will be a sign of storm warning.

FISH WARDEN WRITES FROM FRANCE

August 21, 1944.

Dear Mr. French:

Several days ago I received copies of The Angler from January through May. Words cannot express my appreciation nor can they express the pleasure I have derived from being able to read the Angler again. While in camp in the States my wife forwarded them to me, in England I received one copy, and these are the first I have received since arriving in France. It really is swell to read about what the Fish Commission and clubs are doing, changes in the law, resolutions of the Federation of Sportsmen's Clubs, and other items of interest.

During the month of May, while still in England, I received your letter, in which you said you wished me to write to you from time to time, so here goes. Don't know whether you have ever been to France, but I can assure you it would be more pleasant to tour the country in peace time than at present. The further inland I go the more beautiful the country seems to be and nearer draws the time when I can return to good old Pennsylvania. At present I am in some of the most beautiful, level, farmland which I have ever seen. The fields, crops, buildings, and roads have not been damaged or destroyed here like they were further back towards the coast. There are nice crops in the fields and the farmers are cutting hay and wheat. Bet the people will be glad to have that wheat and make good bread again, after eating black bread for so many years. I have tried their black bread and can assure you that it is not very tasty. They also have large apple orchards here and the trees are hanging heavy with fruit. The French use cider in place of drinking water since they have no way of purifying water.

We are usually kept very busy and don't have much time to visit any towns, but even if we had, they are off limits to American troops and we are restricted from visiting them. However I have passed through a lot of towns, while on convoy, which you have read about or heard mentioned on radio broadcasts of the news.

Near where I am now bivouacked there is a huge chateau built of stone, which from its weather beaten appearance I imagine must be centuries old. There is a moat about 30 feet deep and 40 feet wide surrounding the chateau. The grounds around the building and outside of the moat are very pretty since flowers, shrubbery, and fruit trees are planted in abundance.

The French people are very friendly toward us and stand along the highways and wave and throw flowers to us as we go by. If a convoy should stop the people come bringing cognac, calvados, and cider for us to drink. We can usually get fresh eggs by trading candy or cigarettes for them or by buying them with money, although sometimes they just give them to us.

It really is a pitiable sight to see the people returning to their homes in territory occupied by our troops. They may be returning to a house and sometimes it is just what remains of a house. They sometimes travel by horse drawn carts, bicycles, walking and I have seen quite a few pushing wheelbarrows loaded with what remains of their possessions.

Since arriving here I have done a lot of hard work, had some fun, and saw things which were not pleasant; but taking it all in all it has been an experience.

Well Mr. French this is the story of France and the things going on here at present

Form 3526,-Ed, 1933

and I hope the time soon comes when I can return to the forests and along the streams of Pennsylvania.

Will be glad to hear from you at any

Your friend, C. W. SHEARER.

Note—Mr. Shearer is the State Fish Warden for Armstrong County.

FISH WARDEN WILCOX MOVES TO WYALUSING

Paul D. Wilcox, district fish warden, has sold his property on Crooks Terrace and will move to a home near Wyalusing which will be more centrally located for his work and will save him much travel.

ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933 PENN SYLVANIA ANGLER
(Insert title of pu ER published Monthly of publication.) (State frequency of issue.) Harrisburg Pa.

Name of post office and State where publication is entered.) Pennsylvania STATE OF..... Dauphin COUNTY OF.... Before me, a Notary Public in and for the State and county aforesaid, personally appeared H. R. Stackhouse, who, having been duly sworn according to law, dcposes and says that he is the Administrative Secretary of the Pa. Fish Comm. Publishers of the Penna. ANGLER (State whether editor, publisher, business manager, or owner.) (Insert title of publication.) (State whether editor, publisher, business manager, or owner.)

(Insert title of publication.)

and that the following is, to the best of bis knowledge and belief, a true statement of the ownership, management (and if a daily paper. the circulation), ctc., of the aforcsaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse 1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Post office address-Publisher Board of Fish Commissioners So, Office Bldg. Harrisburg, Pa. Editor (Vacant) Managing Editor..... Business Managers.... 2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockbolders owning or bolding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual membor, must be given.) Commonwealth of Pennsylvania So. Office Bldg. Harrisburg Pa. Board of Fish Commissioners 3. That the known bondbolders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) 4. That the two paragraphs next above, giving the names of the owners, stockholders, and security bolders, if any, contain not only tbe list of stockbolders and security bolders as they appear upon tbe books of the company but also, in cases where the stockholder or security bolder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, bold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to bolieve tbat any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him. 5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is......
(This information is required from daily publications only.) (LS) H, R. Stackhouse Admin. Sec'y. (Signature of editor, publisher, business manager, or owner.) Sworn to and subscribed before me this 2nd. day of October 198/44. (LS) Harry D. Dando N.P. [BEAL.] (My commission expires Mar 3, 1947 1933.) NOTE.—This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant tmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this state at the the second issue printed next after its filing.

6—6012

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE

POSTMASTER: BE SURE TO READ AND CAREFULLY OBSERVE INSTRUCTIONS ON THE OTHER SIDE.

PERHAPS THIS IS THE ANSWER TO THE QUESTION-WHY?



Johnny Mock

Sometimes you may wonder why the fisherman living next door never invites any of his neighbors to accompany him on his fishing trips. Perhaps you have been curious as to why the same chaps are always his constant companions.

Fishermen are choosey of their companions because of experience. They have long ago learned that only a few—a blessed few

-make suitable pals.
As was once said: "The joy of fishing in far places is as bright and fragile as a soap-bubble. In its perfection it attains ecstacy beyond the reproduction of the most gifted writer—which is why genuine poems of angling can be counted on a man's fingers, yes, perhaps only on his thumbsand, like the bubble, when the delight is marred, it vanishes entire."

It's amazing the number of individuals who can wear out a welcome, almost before the trip gets under way and how they can put a damper on the days to come.

Among the first to reveal his true colors is the human chatter-box, who apparently doesn't realize that one does not go fishing to listen to a never-ending gabble-babble. Next in line comes the combination kidder and joker who has the impression that a stay in the woods must be at battle of wits. He sees humor in everything and thinks it funny indeed when the guide falls and breaks his leg.

Third is the chap who is constantly worrying about his health—the guy whose imagination gives him pneumonia the moment a few drops of rain hit him, then begins moaning about the distance he is from home and how far it is to the nearest doctor. Symptoms of every sort make their appearance with the suddenness of a mule's

kick. Then there is the wise guy, who is ever ready with his advice on how this or that should be done, criticizing every movement that is made, never forgetting to remind the others, "Remember what I told you."

Another of the group which seldom, if ever, gets an invitation is the gambler whose sole delight in a fishing trip is in the number of fish caught. The beauties of nature and the surroundings in which he finds himself mean nothing to him so long as he can take a number of fish sufficient to win the bet. He'll wager on the first fish, the biggest fish, that this plug or fly will take more fish than that plug or fly.

By JOHNNY MOCK

"All Outdoors", Editor, The Pittsburgh Press

The "crepe-hanger" can't be overlookedhe who knew fishing would be better where he suggested going; how much more delicious the fish were fried by the guide he had last year; that the coffee is terrible and so on and on and on.

There's also the fellow who always insists on making just one more cast, before going back to camp, but he never says with how many flies or plugs, while you and the guide burn up at the delay, while the threatening clouds come nearer and nearer.

Not to be forgotten, either, is that delightful person who develops a bossy complex and after the first portage takes full charge of the party, handing out orders with the precision of a machine gun. Probably among the most unwelcome of these unwelcome types is the chap who has "ants in his pants"—the restless gink who is always leading the others to a better place to fish or camp, "just around the next bend in the river."

A trip can always be made more pleasant -especially for himself-by that individual who is always on the lookout for a way by which he may be shared his share of the KP duties. Last but not least, there is that other well-known character known as the alibi-artist with his ever ready excuse.

With such members in the party and no way to leave the "bush," it is readily appreciated why the fisherman becomes choosey with his companions. Only the law prevents bloodshed, for many a chap who entered the woods would never leave it, for were it possible they would be buried where they fell-and justly so, for a wet blanket can surely dampen the pleasures and joys of a trip astream.



Jess Romesburg of Berlin R. D. 4 and the fine S. M. B'ack Bars—22½ in. 3 lb.-10 oz., caught in McDonalton Dam.

A rod or a gun For a he-man's fun, With a love for the field or stream In the cold, crisp air Or the sun's hot glare, A sportsman fulfills his dream.

A keen delight In the game bird's flight, And the skill of the hunter's aim, The jerk and swish Of a well-hooked fish Bring joy, in the quest for game.

Let's fill the cup, And then lift it up In a toast to the sportsmen all, Who take their chance In the broad expanse, And go where the wild shall call.

EARLE C. RICE

Shows Dad How!

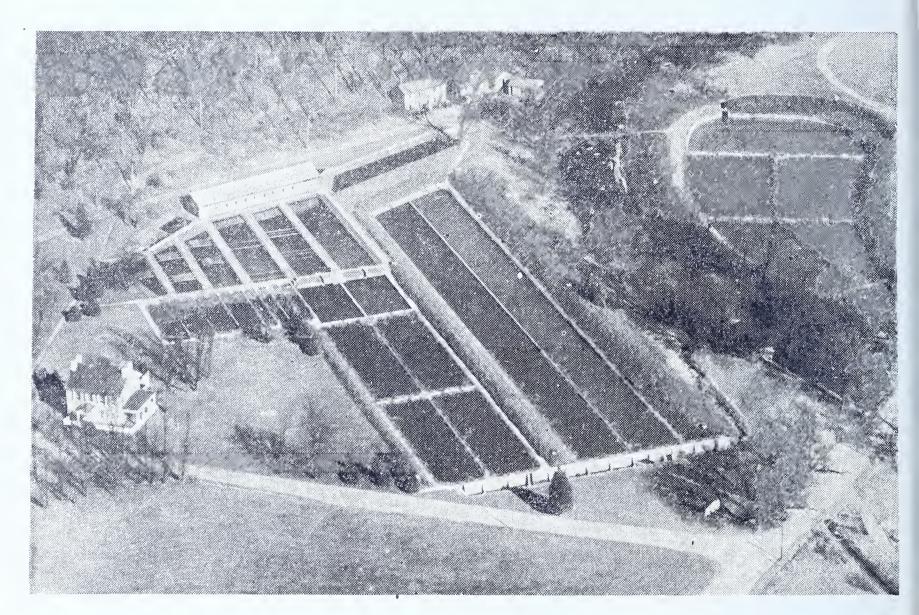
Seven-year-old Larry Deskins of Brackenridge and the 18½ inch small-mouth black bass he caught in the Allegheny River, near Emlenton. Larry hooked the big fellow and landed him unassisted. A soft shell crab was the bait. Congratulations Larry and may the future hold many happy "Fishin" days in store for you.

(Note—Information furnished by Robert M. Deskins, 1033 Cleveland Ave., Brackenridge, Pa.)



PENNSYLVANIA FISH COMMISSION WILL PURCHASE FISH FARM AT ALLENTOWN

Trexler Hatchery Will Be Fish Farm Number Ten, in The State's Big Outdoor Program



A T THE meeting of the Board of Fish Commissioners held on Monday, September 25th, it was unanimously agreed that the necessary steps be taken to purchase what is known as the Trexler Fish Hatchery, located near Allentown, Pennsylvania. This hatchery is a part of the Estate of the late General Harry C. Trexler and was operated as a commercial hatchery for many years. The Board believes that this will be a real addition to the present fish farms which are now in operation and will give the Board a plant which can be operated immediately and which has been needed for many years in the southeastern section of the state.

In addition to the land included in the hatchery proper the City of Allentown will agree to turn over to the Board certain property above and below the present boundary line of the Trexler Hatchery so that it will be possible to propagate various

species of fish and will give ample land for future development.

A lease for the city lands in question, as discussed last fall in Allentown between Commissioner Charles A. French and Thomas O'Hara, chief engineer for the fish commission, and members of the Allentown city council would involve the meadow lands between Fuller's bridge, above the stone spring house, up the stream to a section immediately below the picnic grove at Rathbun's bridge.

A Post-War Development

The present Trexler hatchery which is planned for the propagation of trout, under the proposed plan by the Fish Commission would also be constructed in a giant postwar project to include the raising of warm water *game fish such as bass. The revamped Trexler Hatchery, embracing all the meadow lands from Rathbun's bridge down to Fuller's bridge would be the largest of its kind in the east.

Courtesy-Call-Chronicle Newspapers, Allentown

Trout from the present Trexler hatchery, to be operated as is until the war is over, would be used to stock the fresh water streams of Lehigh and all adjoining counties, including short runs to the numerous trout streams of the Pocono mountains.

Bass and other warm water species are being considered for liberation in the many pends of the Pocono mountains and the warm water streams of the east, especially the Perkiomen Valley.

The over-all development, as planned by Thomas O'Hara, Chief Engineer for the Fish Commission, would include a total of 82 ponds with a total water area of approximately 18.42 acres. This would include 58 earth bank ponds with concrete bulkheads and one concrete trout nursery of 24 ponds. The depth of the earth ponds would be five feet at the outlet end, which would allow for them to be drained by gravity when cleaning. The concrete nursery series would

be three feet deep, and would be arranged so that they would be drained by gravity.

O'Hara in his report considered the possibility of flood damage which has affected the Trexler Hatchery, but as expressed by the engineer this danger has been eliminated to a large extent by the construction of a new highway bridge over the Little Lehigh.

Present Hatchery

As based on the engineer's report the present hatchery comprises 15 acres, more or less, and consists of 29 ponds. A further inventory shows that there is a ten-room stone and stucco Colonial type house used by the present superintendent; one frame three car garage; one 24 x 100 foot hatching house equipped with one supply trough and 46 hatching troughs; one two story frame market house with refrigeration; one frame storage house used for the preparation of fish food; one pump house with a 9 foot, Fritz water wheel.

Two additional homes, one south of the highway familiarly known as the Creveling home and another known as the Beiber home, the latter across from the Boots and Saddle riding club, are also included in the proposed real estate transaction.

As a natural asset to the hatchery there are six individual springs, with a combined flow of 1,400 gallons per minute. Five of these springs are located in the vicinity of the existing hatching house, with a combined flow of 1,070 g.p.m. and the sixth in the cellar of the Creveling home to the south of the hatchery which has a flow of 330 g.p.m. Water from the Little Lehigh is also used in several of the later ponds for the propagation of fish at the present time.

O'Hara's report on the survey of the local hatchery said, "The general condition of the hatchery is in a good state of repair, and could be operated as is for sometime with ordinary maintenance."

Factors Considered

Members of the Commission who were unanimous in accepting the tentative purchase contract, considered the following points:

- 1. The acquisition of the Trexler Hatchery would give the commission its first operating hatchery here in the southeastern part of the State.
- 2. The present hatchery is an operating unit and would be operated under the present plant for the duration.
- 3. Provide a large scale post-war project of construction.
- 4. A hatchery in the eastern part of the State would save considerable truckage, gasoline, and tires for stocking. Under the present program trout are shipped here for stocking local waters from Bellefonte and Huntsdale.
- 5. A shorter travel distance would mean a higher percentage of live trout or bass delivery and as such be a benefit to the sportsmen.
- 6. Ample room for expansion under the leasing program of City lands to construct the largest unit in the State.
- 7. Sufficient water to operate a modern fish propagation unit. The six major springs on the property along with that of the Little Lehigh will provide all the water necessary to operate the plant and even more.

STREAM IMPROVEMENT

A Well Directed Branch of -- Club Activities --



Improvement Plan near the headwater of stream

Emaciated Streams are Gradually Being Reclaimed and Once Again Made the Home and Natural Habitat for Both Game and Food Fish!



Two separate and distinct types of dams.

THE SNAPPING TURTLE AS A PREDATOR

By HARRY EDWARD MILLER

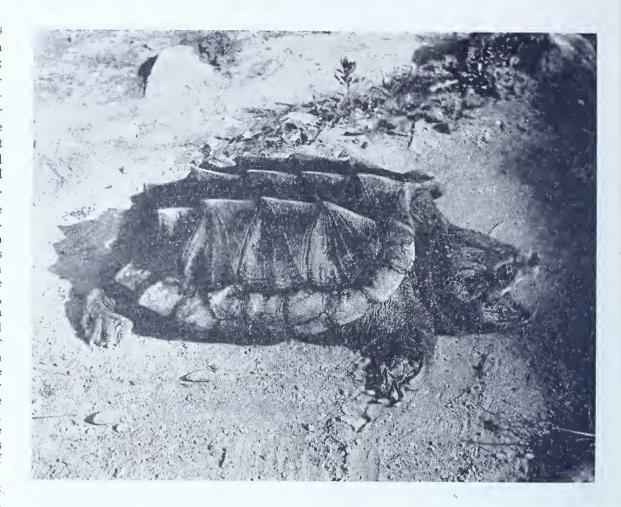
THE SNAPPING TURTLES have perhaps gained more attention for their kind than any variety of turtles in all North America; their large size; their bulldog ferocity, stubbornness, and tenacity, backed up by powerful jaws and muscles; their fondness for fish and game birds; their longevity; have all served to make them of importance not alone to the hunter and angler, but to all classes of people in any manner concerned by such horny shelled interesting reptiles.

Widest recognized of the Snapper tribe (the distinct family of Chelydridae to naturalists), is the Common Snapping turtles, an extensively distributed creature, for this reptíle is at home in southern Canada from Nova Scotia to the Rocky Mountains; in the United States from New England to Florida. then ranging westward to the Rockies; from those heights down through Mexico, Central America at least to Ecuador. The Snapper south of the United States and one in Florida are said to differ slightly from the distinctly northern type. While it is a New World turtle, there is, moreover, one type far away in the Pacific on the great island of New Guinea, where it is found along the Fly River. Giant of all our land turtles is the massive Alligator Snapping turtle of the southwestern United States in the Mississippi valley and some other adjacent regions. This is a decidely larger individual than the Common Snapping turtle.

With the Common Snapping turtle, the average weight of the older adults may be from forty to sixty pounds; there is a record of one fattened in a swill barrel, to put the reptile in a better shape as an article of food, that weighed almost ninety pounds. A weight like that is rare, however. A Snapper reaching fifty or so pounds may have a length of nearly a yard, but individuals of such a size are not at all common. The head, long neck and tail aid greatly in the total length of reptiles of this proportion.

Certain specimens of the Common Snapper are known to attain a remarkably long span of life. Agassiz writes of one he knew to be forty-five years of age, and it is highly possible a limited number of individuals may exist for three quarters of a century. A creature distinguished by such an age may be like an Ontario Snapper recorded by the noted naturalist, Dr. E. B. Shelly Logier, which, he tells us, was "thirty-eight and one-eighth inches long from snout to end of tail."

The Snapper, as so many know, is equipped with unusually strong beak and jaws, often fixing upon an object and hanging with the determination of a bull dog, jaws capable of biting off a man's fingers. The head of this reptile is large and muscular; the carapace or upper shell, is of a dull olive or a shade of dark brown, even at times a deep black; the plastron, or under shell, varies from a pale yellow to a brownish tone. The upper



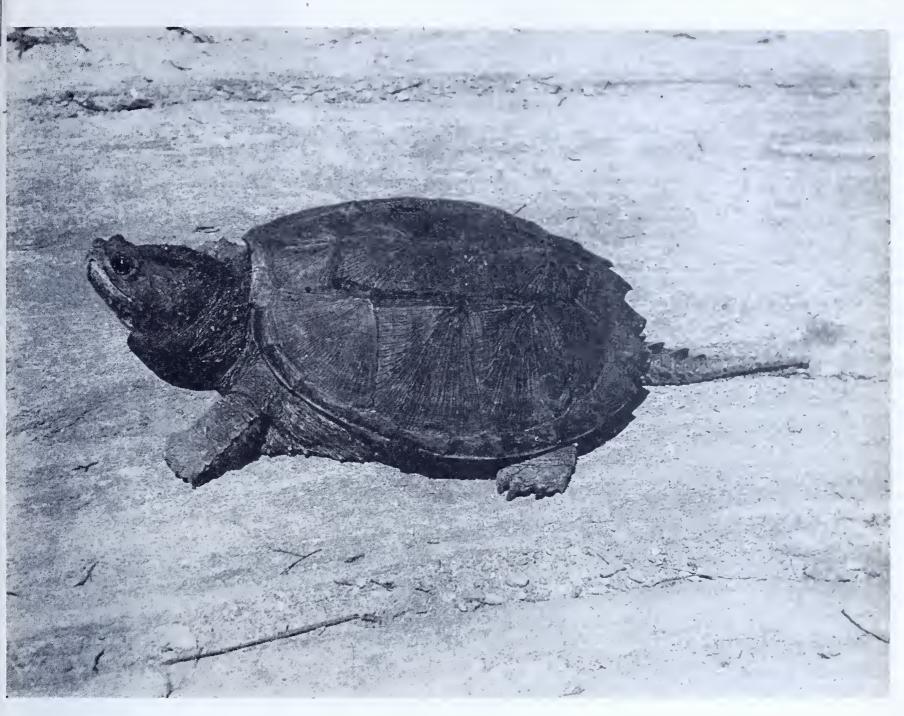
shell in front bulges high, becoming lower in the rear. The shell of the young is fluted at the rear, later having smoother edges. A marked peculiarity of the Snapper is the small size of the under shell, unlike most other varieties of turtles familiar to us.

The hunter and fisherman are naturally not a little concerned by the game birds and fish preyed upon by Snapping Turtles of our nation and Canada. The game birds, more particularly such as ducks, are from time to time seized and hauled under water, more of the younger duck population, apparently, suffering these attacks. The Snapper has even been known to go ashore, there to drag birds from the water's edge to a grave beneath the surface of pond or stream. The farmer's domestic poultry wandering too near the turtle's retreat occasionally becomes a victim.

The Common Snapper has a habit of traveling about the country from time to time, and may suddenly appear in a pond or stream at a considerable distance from any other body of water. A New York state farmer known to us had a small, shallow pend for his ducks near the farm homestead. After awhile young ducks were constantly missed; the farmer blamed rats, cats, hawks, and most every carnivorous creature except the turtle, until, one morning, he saw a duckling vanish beneath the water; it failed to return to the surface! The pond, which was a goodly stretch from any other water that might offer sanctuary to a turtle, was promptly drained and examined, when two large sized Snappers were discovered; it is

certain the angry farmer despatched these enemies of his ducklings without any delayed ceremony.

Around fish hatcheries and game preserves this turtle may become a nuisance; by all means it should be promptly removed from any such premises. When everything is summed up we have no actual proof of the total damage the members of the Snapping Turtle family may work among fish and game birds. Its predatory disposition is known to be far too evident to please most anglers and hunters. When this is admitted and after we have considered habits of the turtle making the reptile unpopular, we might turn to another side of the picture and recognize that the turtle, preferring the more quiet, sluggish waters, fails to come into contact with many game fish inhabiting clearer, swifter, colder bodies of water. The fact is also true, say naturalists, that the Snapper takes many fish that are weak, diseased, undersized, thus actually paying in part for some of the damage he may do. The Snapper feeds on carrion of all sorts, thereby helping to purify the waters; he líkewise thrives on various water vegetation and is not strictly carnivorous; vegetation such as marsh grass, duckweed, white water líly leaves, being among the aquatic growth relished. He is a voracious feeder on crayfish, molluscs, water beetles and other water insects; not to forget frogs and snakes; and among the fish those most frequently seized are such as minnows, carp, suckers, bullheads, sunfish; and bass in probably far less proportions. In captivity the Snapper feeds



readily on scraps of meat, cheese, fruits, lettuce, and various other odds and ends of food.

It is a reptile of sluggish movements, except when it thrusts forth its snake-like head with lightning rapidity to seize some creature that has ventured too close to its resting place. Food must be submerged before it is eaten, otherwise the turtle seems unable to consume what it is offered to it or what it has captured. Hence water must be provided when it is a captive. In captivity it is as a rule cross and moody; one's hands or other parts of body must be kept out of range of the reptile's jaws; whenever a Snapper is carried hold it firmly by the tail and well out from your body. Remember, a large Snapper is a formidable antagonist, one that, with its powerful jaws, is the only American turtle thus equipped for fighting and defense. Even in the open, when the turtle is on land, it may advance to attack one; the recently hatched young are often noted for displaying the same pugnacity. It is a reptile primed for a fight whether the contest be with man or some lesser creature. Report has it there is an age-long feud between the Snapping turtle and the otter, perhaps a bitter and longstanding feud as that celebrated in Oriental

literature concerning the tiger and the python. However it may be, chroniclers inform us the otter likes nothing better than a fight to the finish with a husky Snapper, a struggle in which, we are told, the otter is nearly always the victor.

While the Snapper has no large number of enemies, man is his chief enemy, and while not forgetting the reduction in the ranks of Snappers deliberately made by man, we must add to the number those Snappers killed by automobiles as the reptiles, moving slowly, may be crossing certain highways. Young Snappers are taken to some extent by crows, hawks, and various mammals; while turtle eggs are prized by skunks, foxes, raccoons, and some birds.

Ranging as it does over so much of North America, even at altitudes up to three thousand, even five thousand feet, it is, as we noted, perhaps the turtle best know to the largest number of people. In warmer areas of the nation the creature is not forced to hibernate as a protection against the rigors of winter, but in colder regions it begins to disappear early in October, not to reappear until March. Mud at the bottom of bodies of water, holes in the banks along water, such as muskrat burrows, or even the shelter of a stone or a log in the water may harbor

it while sleeping through the wintry period. About mid-June, having recently come from hibernation, the female Snapper deposits her eggs, selecting a place at the edge of the water, or perhaps going hundreds of feet over land to entrust her twenty to forty round, white eggs to the earth, even sixty or more eggs having been known in a clutch. These are buried in the soil and left for the incubation period of ninety to one hundred or more days. In the far north of the turtle's habitat eggs may be in the earth all winter to be hatched in the spring. The young are about an inch in length as they come from the spherically shaped shells; as soon as they are free from the shell they start their journey for the nearest water although they may have been brought into the world a half mile from any stream or other water.

Many an angler and hunter, as well as people in general, consider turtle flesh among the delicacies to be placed on the table, and some people, likewise, relish turtle eggs. Those turtles plumped up after they have fed in swill barrels are most prized. Since Colonial days, certain inns of cities like Baltimore and Philadelphia have been noted for their turtle dinners and turtle soup, drawing within their dining rooms a host

from far and near eager to partake of choice and tender turtle meat.

As a much sought for table offering the same is true of the great Alligator Snapping turtle. To encourage the use of these turtles to satisfy man's appetite for delicately flavored viands, the United States Department of Commerce has published a pamphlet setting forth the merits of turtle meat as ranking high among the most esteemed palate ticklers.

Excepting some of the jumbo sea turtles, the Alligator Turtle is North America's mammoth of all such reptiles. It is an individual constantly hunted, being a favorite as food and its eggs highly esteemed. This ponderous water dweller has been mentioned as weighing up to two hundred and twenty pounds, and growing to a length of over four feet. A specimen taken at Metropolis, Illinois, easily carried on its back a man weighing 165 pounds. These turtles have jaws so remarkably strong as to snap an inch board as though cleft by an axe; a man's arm they can bite off as quickly. It is, beyond dispute, the crossest, fiercest, most to be feared American turtle. As a captive it is ever dangerous and constantly of a sullen disposition. Have a care how much you expose your body to such formidable jaws.

The reptile, being somewhat elongated of body, was thought by the early pioneers to be a relative of the alligator; hence its distinguishing name. Its home is the country from southeastern Georgia and upper Florida westerly through the Coastal Plain as far as Austin and San Antonio, Texas. Along the Mississippi valley the reptile is found even north to Quincy, Illinois, also along the Ohio river to the lower Wabash river between Illinois and Indiana. It has been captured as far up the Arkansas river as the western area of Arkansas, and has been seen in the southeastern district of Oklahoma.

The Alligator turtle ventures upon the land perhaps less than the smaller Common Snapper, but frequently seeks the land in summer to deposit, on the part of the female, from twenty to forty spherical white eggs the size of golf balls. This powerful reptile has a dull yellow or pale brown upper shell, with three rows of keels; the under shell is paler but similarly colored. It is a creature seeking rivers, bayous, lagoons, swampy lakes and ponds, preferably haunting waters with muddy bottoms. It seizes many fish; most of which are non-game fish, while frogs, snakes, water birds, water vegetation help to increase its bill of fare. Along the Mississippi, as well as elsewhere, it is much hunted by man, hunters and anglers resenting its taking of fish and game, birds, and also desiring the turtle for its food qualities. Hence, as with the Common Snapper, man is the foremost slayer of the Alligator Turtle. We lack any reliable scientific knowledge establishing the actual amount of destruction the turtle does to fish and game birds, particularly to those fish most desired by anglers.

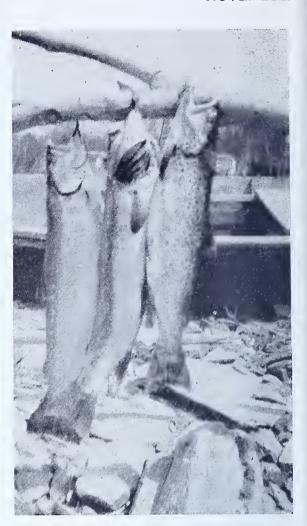
Like the Common Snapping turtle, its larger cousin frequently lives to a very advanced age. The Philadelphia zoo has a captive of this variety of the turtle family "considerably over fifty years of age." It is highly possible a few individuals may round out an ever century, perhaps a little more for good measure.

Hunters and anglers, at least many of

them, naturally believe Snappers of all sorts should never be permitted to increase beyond the danger line; even extermination has sometimes been threatened against the whole Snapping turtle family. But extermination would hardly be possible in most areas, while in particular areas control of such predators is usually desirable, and certainly these long-lived creatures are out of place in game preserves and fish hatcheries where they may do constant damage unless those areas are constantly guarded against predators so unwelcome.



E. L. Williams—Shamokin and a fine rainbow— 24 in. and weighing $4\frac{1}{2}$ lbs.—Penn Creek—on a cricket.



Three dandies taken from lake Wallenpaupack by Herb Hummel of Lebanon.



16 pound "Muskie" from the Oswago. L. E. Kaake and the fine Muskelunge he caught in Pennsylvania's Oswago Creek.

"TACKLE STANDARD"

(From page 3)

for bass in large streams or lakes, both aceuracy and distance are needed.

These three factors, distance, accuracy, and delicacy are the essentials of all true sport fishing, and are the basic fundamentals of tournament casting.

There are two kinds of fishermen; those who fish for meat, and those who love the sport. It doesn't bother the meat-fisherman that he is missing almost all of the fun in fishing. He can nearly always get fish, and he doesn't need good tackle. If his bait fails, he's apt to try dynamite, or a net . . . or even a trap.

The sport-fisherman, however, demands action. He is forever trying to improve his tackle and skill. He doesn't wait till a fish comes along and takes the bait, but seeks to so handle his lure that any fish within sight will rush for it. He gets more action, more sport, and more fish in an hour than the meat-man gets all day—maybe all week.

Now, do you see how adherence to the "standard tackle" rule prohibits the development of any betterments in tackle, and that the most prolific source of all such betterments is the contest caster? Any enforcements of that rule would prohibit the fly fisherman from splicing lines for various lengths and tapers. It was from this kind of experimentation that came all the really good fly lines. It would prohibit any reconstruction of reels, and it was the tournament casters who first built the models upon which all the best casting reels are now made.

How would you judge a rifle club that limited its members to the use of hunting rifles for target work, or a gun club insisting upon its shooters using single-barreled "gas-pipe" guns? The next step would be to prohibit the use of anything but "standard loads." Target rifles were the forerunners of all modern fine hunting rifles, and it was the "gun-crank" who, by private experiment and initiative, first evolved all of the improved weapons of today.

Likewise, the casting fan has created most of the improvements in tackle and has independently discovered most of the betterments of fishing. To prohibit him from this independent experimentation and research is asinine . . . and that's putting it mildly.

III. FUNCTIONS OF A CASTING CLUB

There are two fundamental reasons for the existence of casting and fishing clubs. These are "the betterment of fishing" and "the interchange and dissemination of information that will assist in the pursuit of the sport." Without these in some form, no organization can survive.

"Betterment of fishing" covers in three words the entire field of propagation, conservation, and protection. It includes the restoration of contaminated or depleted waters. The prime requisite of fishing is fish, and it is therefore to the angler's best interest to increase the number of fishable waters and the number of fish in them. To this end he should exhaust every possible political and personal effort.

The "interchange and dissemination of information" includes instructions in all arts pertaining to fishing, such as easting, fly tying, lure making, line construction, rod making. And the modification of equipment to meet special conditions.

Commercial grades of rods can often be substantially improved by judicious remodelling. The usual trouble with such rods is that they lack in speed and pep. This can often be remedied by increasing its diameter with respect to its length.

The easiest way to do this is to remove the ferrules and take off a bit of cane just above or below them, and then referrule. Should any rule deprive a caster of his right to do this? If one caster can apply better skill and judgment to such remodeiling than another, should it deprive him of his right to cast it?

If any sportsman is capable of making a better rod or designing a more efficient reel than he can afford to buy, he should certainly be allowed to use it.

IV. CONCERNING COSTS

The first cost of almost anything has some direct relation to the service expected. Tournament casting involves more actual use of a rod in a single season than its owner can impose in many years of actual fishing. It is cast after cast in long periods of practice and in contests, so rods that may hold up for years of fishing might quickly disintegrate at the casting club.

The late Ted Traulsen, the closest competitor of Primo Livenais in surf easting, used to buy several commercial grade cane rods each season. He wore them out, one after another, before he realized that better selected canes, built to take punishment, were far less expensive in the long run.

In both surf and salmon-fly casting, a good many casters found the ordinary natural cane Calcutta rod as good in results as the finest split cane; indeed, far better than the usual commercial canes. But, these continually softened under casting, had no recuperation, and had to be frequently replaced. Furthermore, no two were exactly alike, which required that they be cast differently, thus placing the caster under economic as well as competitive disadvantages as compared with rods really built for work.

Many clubs continue to use these rods because they can afford them, although with better rods they would undoubtedly set up new records. Here on the west coast, no real contender for the surf distance record ever gave them consideration, although, of course, they gave them extensive trials. This is also true in the salmon-fly event in which they also found some use by casters.

The tournament-surf rod is now perhaps fully developed as to design; the salmon-fly distance rod is still in evolution, as is also the line and the cast. Pronounced betterments should not only be possible, but will be discovered through experiments. No rod-maker can himself make such experiments, unless he were the world's champion caster with every kind of rod he makes. It takes the best shot in the world to prove that any rifle can be the best, and it takes the world's best caster to prove the same thing about a rod.

As a rod-maker, I hope that easters will continue to experiment to learn, and to discover in order to prove the true worth of all kinds of tackle. It is only the casting clubs which can lead the way in the development of tackle as well as provide instructions on stream and shore which will enable all anglers to do far better fishing. Never should such clubs, provide in their by-laws that only "standard fishing tackle" be used.

Such discrimination will not only halt the further improvements of tackle, but will tend to the deterioration of all real fishing by accentuating the poorest sorts of it. The effective interest in tackle betterment will not come from those contented to "nigger-fish" in ponds, but from those who go to the living waters of the sea and mountains where fishing is real sport. America has plenty of real good fishing that can be increased many fold, if properly exploited.

V. SELECTION OF TACKLE

Immediately after the tragedy of Pearl Harbor, rod manufacturers, anticipating the shortage of cane caused by the Japanese occupation of China and Indo-China, warehoused added shiploads of material for future use. Practically all of this was converted into ski poles for our troops, by order of the government. Research conducted by the United States Bureau of Standards, showed that no other material could equal cane for that purpose.

They also found that no better method could be used to make these poles than that already practiced by rod-manufacturers in fabricating their product. No better glue, nor no better method of cutting and assembling could be devised with any advantages over those already in use. This is a most authoritative confirmation of the fact that the modern cane rod is the best to be had as compared with all other materials.

Metal and synthetically bonded canes, for some uses, leave little to be desired, but for ultimate lasting quality, recuperation from stresses, and balance of action, no other can equal the rod of cane.

Today, in standard brands, one can find rods of really fine casting quality and lines that are so made to cast well and lay a fly on the water at considerable distances. Mass manufacture and the substitution of machine precision for human skill, where possible, have had this result. Indeed, good rods, much better than the best hand made jobs of a few generations back, ean now be had for much less money.

But that does not imply that all of them are equally good, or indeed, that some of them are in any way good.

The trouble with the average customer is, that he does not ask advice. His selection had already been made from a show window or from some fancy advertisement, and it's the job that looks nicest and costs less that gets his money. Most sporting goods dealers are themselves sportsmen, and can be a real help in the selection of tackle, but when a customer comes in with his selection already decided upon, what can the dealer do? If he suggests spending more money, the customer will, in most cases, go elsewhere.

Therefore, patronizing a reliable dealer,

(Next page)

TACKLE "STANDARD"

although always advisable, doesn't assure one that he is getting the best rod or reel for his purpose. The place to find out about them is among those who have used them. The fisherman may not be able to get much of this information while on a fishing trip, but he can always get plenty of it at the casting courts or pools, where it is put to the real test.

VI. Advantages of Organization

Fishermen should get in the know from every angle by joining a real club. In the large cities, they are more apt to be called a casting club than a fishing club, but the members are all real fishermen, the kind from which one can learn. They will have a private casting court or a pool in which the members may cast.

The casting club is a fine place for the manufacturers of rods and reels to initiate or further the sale of their products. It is also there that the makers of the flimsy and the phoney spread their gospel of "Standard" tackle. It certainly is standard. It conforms to their standard of good looks and low prices. The town's leading merchant is often the leading spirit in the organization of the club, and he has a full line of tackle of this "standard" excellence.

Clubs and their members should not be so gullible as to allow themselves to be handicapped by rules peculiar to any kind of tackle. They should maintain their right to use any tackle they can afford to buy or make. They should also avail themselves of membership in the National Association of Casting Clubs.

Although the latter accentuate their contests and their casting, they compose, in reality, a body of the most skilled fishermen of America. Casting affords them the opportunity to keep in form between seasons and to acquire added skill. They learn more about fishing from one another. They do no real promotion of the organization, but welcome any club desiring to affiliate.

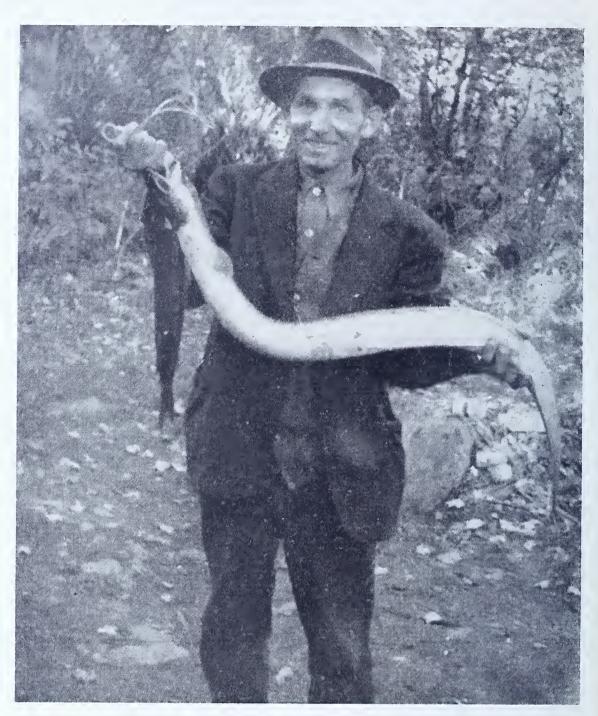
I hope to see the time when all clubs will join this association, to the end of more effective benefit to fish and fishing. Also when more active steps will be taken to include all clubs to that end.

At the present time, clubs, as well as fishermen are poorly organized in that they have no effective method of securing national aid for better fishing and more of it. There are more fishermen in the United States than there are either Republicans or Democrats, and if they united politically, what "Ducks Unlimited" has done for wildfowl would not be a tithe of what can and should be done to better our fishing.

NOTE: Mr. Stoner's article introduces a subject of paramount importance to all casting clubs and anglers. Readers of the Pennsylvania Angler may have ideas of their own either agreeing or disagreeing.

"If there be anyone in the congregation who likes sin let him stand up. What's this, Sister Virginia, you like sin?"

"Oh, pardon me, I thought you said gin."



Mammoth eel from Island Lake. John Morrison, 1505 S. Irving Ave., Scranton, and big eel measuring 47 inches and weighing 9 lbs., 2 ounces. Caught in Island Lake, Wayne County. Note the 18 in. pickerel at left which he also took from the Lake.



A new form of dam used in stream improvement.



81/4 lbs. and measuring 24 inches is this fine black bass caught by Ken Eicher of Somerset. Caught in Lake Kuhn.

Mammoth catfish caught by Carl P. Lefever of Safe Harbor, Pa. and released in Lower Conestoga Creek.

Mr. Lefever's son is proudly displaying it.







A. C. "Red" Maxwell, 1254 W. 4th St., Williamsport, and a 33 inch 20 lb. 8 oz. carp caught in the Susquehanna River at Homet's Ferry, Sept. 17, 1944. Using a 6 oz. rod and light tackle, the carp took a "crab.". Red was assisted in landing the big fellow by Ralph H. Van Keuren of the Troy Gazette-Register.

C. E. Carpenter of Harrisburg and a fine bass he caught in the Juniata River. Length—21 in weight—5 lbs. 2 oz.



The East Deer Township Sportsmen's Club met in the town hall, Freeport road, for the annual election of officers. After the regular business meeting a social hour was enjoyed by members and their guests.

Officers were elected as follows: Joseph C. Pavlik, president; Frank V. Drahos, vice president; August E. Hochbein, secretary-treasurer; Albert Belinotte, delegate; Edward Dudzenski, alternate delegate. Trustees elected were Albert Belinotte, three years; John Pavlik, two years and Dominic Farione, one year.



DIMINISHING TROUT STREAMS

By JACK RICHARDS

'Rod and Gun' Editor, Pottsville Republican

WHAT is the future of trout fishing in Pennsylvania? Is the time coming when the only place it will be enjoyed is on state lands? Are all our other streams not now on state lands and open to the public eventually going to be posted or taken over as a public drinking-water source?

These are some of the questions that have been bothering anglers in the Schuylkill County area for half a dozen years. They hate to think about them, for they cannot conceive a world in which there is no trout fishing, and yet they cannot overlook the fact that things seem to be shaping up in just that way.

Half Streams Now Polluted

Half of the creeks in that county have been polluted for years with culm and sulphuric acid from mines. But those that are unpolluted carry the finest and purest water to be found anywhere—water that bubbles from sugar white sand at the bottom of mountain springs. Its purity perhaps, is making it a curse to fishermen, for gradually these streams are being taken over for public drinking water supply.

Lebanon Seeks Water Supply

On November 7 the city of Lebanon will vote for or against a \$1,500,000 bond issue to make possible a new water supply—from Schuylkill County. Should the electorate approve and Lebanon do what most other municipalities have done in posting streams and reservoirs, it means the end of the only two real trout streams that still exist in Schuylkill County.

These are Gold Mine and Jeff's Creeks at Suedberg, near Pinegrove, which after their junction are known as Fishing Creek. With their loss it will spell the end of ten miles of some of the most beautiful trout water to be found. Of course there still will be two or three other trout streams in Schuylkill, but those are repulsive farm creeks. Sure they will support trout, but who wants to fish in them?

The case at Suedberg is only one.

Clark's Creek

There is Clark's Creek, west of Tower City, which a dozen years ago probably produced more trout in its 20 or so miles than any similar stream in Pennsylvania. It was a crystal clear stream with a white sandy bottom and plenty of cover where the big trout could hide. No matter what you fished, bait or fly, if you knew the habits of the trout you could always get some—real beauties, too, fighting native brookies a foot or more in length. There were plenty of violations on the stream by outlaws at night and before the season, but it never seemed to hurt the creek too much.

And then Harrisburg decided that it must have a water supply, its gigantic new reservoir was built and Clark's was lost to the fishermen. When they heard what was happening, there were some trout fishermen who shed tears and weren't ashamed of them.

More Examples

Here's another case: The borough of Pine-grove has a reservoir on Black Creek, another one of those streams like Clark's and from which in 1937 a four pound four ounce native brook trout that held the state record that year was taken. Pinegrove permitted fishing in this reservoir until the war came and then fishermen were asked to stay away until the war is ended. They complied, because Pinegrove had always permitted fishing, for which they are grateful.

And for another Schuylkill County example there are the two big reservoirs at Tumbling Run just outside of Pottsville, built back in the days before the railroads to provide water to float coal barges down the canal to Philadelphia during the dry seasons. The gigantic new Aluminum Co. plant was built near Pottsville last year and fishing was halted there.

Of course Schuylkill County anglers don't stay at home for all their fishing, for they, too, have the idea so many others possess that the biggest fish always are taken in some other fellow's back yard.

Same Situation in Carbon County

A decade or less ago one of their favorite trout streams was Wild Creek in Carbon County, about 40 miles away. Anyone who knows this creek and fished it—and thousands did—will testify that it was without question one of the most beautiful of all our Pennsylvania trout streams.

Wild Creek has gone the way of the others, the huge Bethlehem City reservoir now covers most of its former course, impounding hundreds of thousands of gallons of water.

The City of Philadelphia does a lot of talking about a new water supply and it is said that by impounding Big Creek and also Mud Run, which flow near Wild Creek, enough water can be had to supply both Philadelphia and Bethlehem. Should such action be taken it means more miles and miles of water lost.

Private Clubs Close Streams

Some years ago, too, in that same area at the lower foothills of the Poconos there were two other streams which produced many a trout and gave many an angler happy moments. They were the Tunkhannock and the Tobyhanna, which together form the upper part of the Lehigh River. They have been taken over by a private club and if you want to fish in them now it will cost you \$25 a year.

There are only a few other worthwhile streams left in that area now for anglers. One of them is Fishing Creek above Bloomsburg, 60 miles from Pottsville; the Paupack and the Lackawaxen, 100 miles; the Loyalsock, 100 miles or go into Centre County

to fish Penn's or some of the other creeks in that section, all close to 100 miles away.

There are almost a score of reservoirs in Schuylkill County. To throw those reservoirs and the streams which feed them open to the public would restore fishing at once. But the water companies claim pollution and point to tin cans and old paper and other refuse which litter the banks from careless fishermen and picnickers. It is true that there are some who do such things, but such refuse can hardly pollute a body of water so large. The carcass of one dead deer in a stream would foul more water than all the fishermen. And fishermen often can cite instances of half a dozen dead deer carcasses along a stream during the season.

If the borough of Pinegrove can permit fishing, get the cooperation of the fishermen and have no pollution worth mentioning, why cannot others? And if the water companies are still worried about pollution, let us ask why is the cost of a Chlorination system so great as to be prohibitive?

To most thinking sportsmen the idea of closing off reservoirs is old-fashioned, outmoded. Years ago it didn't matter so much when there weren't so many reservoirs or so many fishermen, and there were enough streams for all. But now it does, especially with recreation playing such a prominent part in the lives of Americans.

If the water companies refuse to see the handwriting on the wall, perhaps our returning service men can convince them. It would be the finest gesture they have ever made to throw open their reservoirs to these returning heroes so that they might enjoy some of the pleasures which they have been denied while they were fighting to save their country—and the reservoirs. It would help to rehabilitate them, make them forget the horrors of the hell they have gone through.

THE SOIL HAS TRICKLED AWAY

"We now are in need of some lumber," The father said to his son.

"Our buildings show signs of the weather, Repair work must soon be begun!"

So they cut down the last of their timber And they hauled it away to the mills.

And they soon had gullies where water Took soil away from the hills.

The years went by and the father Presented the farm to his son.

The buildings showed signs of the weather, But repair work would not be begun.

The farm was barren of timber And the soil was gone from the hills.

The farm was not worth it's back taxes—
It's income was less than its bills!

A farm may be better with buildings Where weather has brought on decay

Than a farm with expensive big buildings With its soil all trickled away.

You can purchase the lumber for buildings With the crops that the soil brings in,

But to try and reverse this procedure Is a system that seldom will win!

-BERT PRUITT.



TEDDY LIKE DAD

(From page 6)

on the run. Hope we can soon get it over with and get back to America for conservation and more pleasurable things." He wrote me again. "Dear Old Timer" from an unnamed front, more recently, with pencil, on paper up against a tank. He was that way with all his friends. He never forgot a friend. He had compassion for his enemies. General Theodore Roosevelt, true to family tradition, went to the wars as soon as they broke out, and died a war casualty. His name will be placed in the memorial of the Outdoor Writers Association of America, high in the Catoctin Mountains of Maryland, along with that of Ozark Ripley, Paul Townsend, Dr. T. Gilbert Pearson, and other sportsmen-conservation pioneers, to which every American hunter, fisherman and sportsman owes so much.

I think he died like Buffalo Bill, his father the former president, John Burnham, and others in whose veins ran the blood of pioneer America—with fortitude and unafraid.

"Good Bye Old Timer. We'll be seein' you in due time."—Reprint from Ohio Conservation Bulletin.

Opposes Posting of Land in State By Private Clubs

Says Fields, Streams Should be for Public
By J. Leon Wells

Chairman Fish Committee

Area Fed. of Sportsman's Clubs

The majority of the forests and streams of any State should be public owned or controlled so that all the people can enjoy them.

One of the finest streams in the State, the Broadhead's Creek in Monroe County. has been so posted by private clubs that there is very little left to be of use to the individual fisherman. This is an old logging creek used by loggers long ago to run logs to the Delaware River. In July, State Assemblyman Jacob L. Moser went fishing in Broadhead's Creek and submitted to technical arrest to test the rights of private clubs and individuals to prohibit use of the stream by fishermen. Moser waived a hearing and posted bail. The assemblyman was echnically placed under arrest for trespassing on the property of Broadhead Forest and Stream Rod and Gun Club. Moser contends that the creek and its four tributaries are public highways.

Moser said he will take the case to the State Supreme Court if necessary and urged that sportsmen prod legislators for relief from this condition. A rod and gun club is supposed to work for the good of all sportsmen, and when it starts to work for selfish interest it ceases to be a Rod and Gun Club. As lovely a stream as the Broadhead Creek, so surrounded with tradition, should be free for all to fish. I know from experience about this stream being controlled by private clubs, and I am glad to see that some one was brave enough to fight it.

Every individual and every club of our

THE ANGLER'S FIELD BOOK

By Edson Leonard
Part III

GINGER QUILL--SPINNER

Order: "Ephemeroptera"
Scientific name: "Stenonema Fuscum"

Derivation of name:
Ephemeros—lasting but a day.

The Ginger Quill is best appreciated in its final phase, the spinner form. Truly a graceful and prolific insect, it appears in great quantities sometimes assuming proportions of a heavy smoke cloud evolving from the stream surface. In reality the spinner has undergone its last transformation or molt: changing from the less graceful dun into the gliding, colorful spinner. Especially in the evening does the spinner return to the water after a brief stage of obscurity along the stream edge. These spinners move in swarms during their process of reproduction. The females somewhat larger than the males are recognizable by the presence of the egg sac; eventually, however, throughout the limited journey the spinner will fall upon the water surface to deposit her eggs and likely become the victim of a feeding Trout.

This phase follows the departure of the dun by about 2 days and I have always believed the trout have an uncanny sense of awareness to the inevitable return. To throw some light on this statement, I have seen trout cruising about as if in great expectation, then when the flight really did appear, indulge in a gorging of spent ginger quills the likes of which I had never seen. Although incredulous to those who are not interested, this condition is unquestionable with regards to other major insect groups.

Interesting is the probability that wet-fly-fishing reverts to adult flying insects in this case. The ginger quill female spinner in some instances will descend the depths of the stream to firmly deposit her eggs on the surfaces and in the crevices of appropriate rocks, etc. Ostensibly the true similarity between the common wet-fly type of imitation and the egg-laden natural is pronounced, although results with the delicate and sparse dry fly will be more to one's satisfaction.

Ephemeros is exemplary of the life of the adult spinner. Emerging in thousands from the seclusion of protective leaves and aquatic foliage, they embark the following evening on the nuptial journey back to the scene of origin. Then, after the eggs have been deposited sometimes by sweeping into contact with the stream surface, the spinner dies and floats atop the pools into the sucking mouths of greedy trout. Physically it is impossible to take food during this time, another mystery of Nature which controls the duration of the fly.

The general color tones are the same as those of the dun save the brilliance which is assumed in this, the last stage. The transparency and fragility of this creature seems to be an integral part of the air, so easy is its flight.

Sparseness, again, is extremely important. Long, resilient hackle is excellent and the wings should be of the finest grade of pale wood duck flank feathers. The bodies require special attention and slim, definitely marked ones will simulate the natural most satisfactorily.

The spent or dead imitations are the most difficult to dress. Try palest grizzly hackle tips dyed a very light cream. Otherwise the remainder of the pattern is dressed the same as the wood duck pattern. The addenda of small but brilliant lemon egg sac and sweeping but firm tail filaments will provide a lifelikeness unsurpassed.

Dimensions are slightly larger than in the case of the Dun. The female wings are approximately one-half inch long, slightly inclined to the rear; the male's wings are slightly less and the tails are likewise.

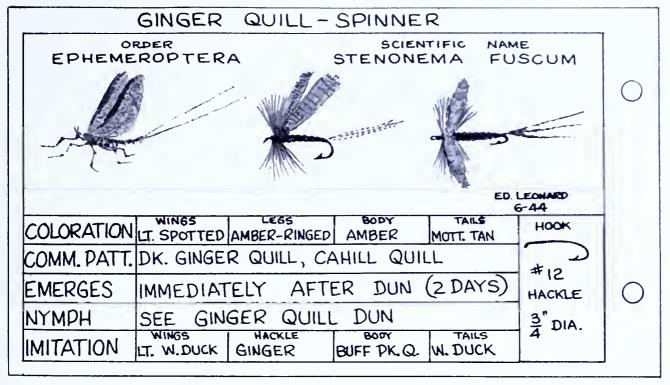
One seldom carries too many ginger quills in any of the described manners or kind.

State should back Mr. Moser or the day will soon come when all of our best streams will be bought up or rented by clubs or individuals with selfish interests. When cultivated lands or farm lands are posted we have no complaint, but when our streams of any size are posted against wading that stream, it's time for us all to wake up. In parts of Europe you will find the best of hunting and the finest of trout streams, but only the rich may enjoy them. We sing the praises of our right to a free outdoors. Then let's all back Mr. Moser in this fight.

FINED FOR TAKING SALMON TRAPPED IN EEL CHUTE

Paul W. Hipple, Bainbridge, paid a fine of \$20 and costs when he pleaded guilty before Justice of the Peace Richard S. Daveler, Marietta, to a charge of operating an eel chute contrary to the rules and regulations of the State Fish Commission.

Hipple, according to the fish warden kept a salmon he caught in the chute, which he operated under a permit from the State Fish Commission.



	GINGER QUILL-SPINNER											
	DATE	STREAM	SECTION	WATER TEMP.	WEATHER	HATCH	TIME OF RISE	WATER STAGE AND CLARITY	PATTERN TAKEN	PATTERN REFUSED	RESULTS DATA REMARKS	
0												

GINGER

	GINGER QUILL-SPINNER										
0	DATE	STREAM	SECTION	WATER TEMP.	WEATHER	HATCH	TIME OF RISE	WATER STAGE AND CLARITY	PATTERN TAKEN	PATTERN REFUSED	RESULTS DATA REMARKS

GINGER

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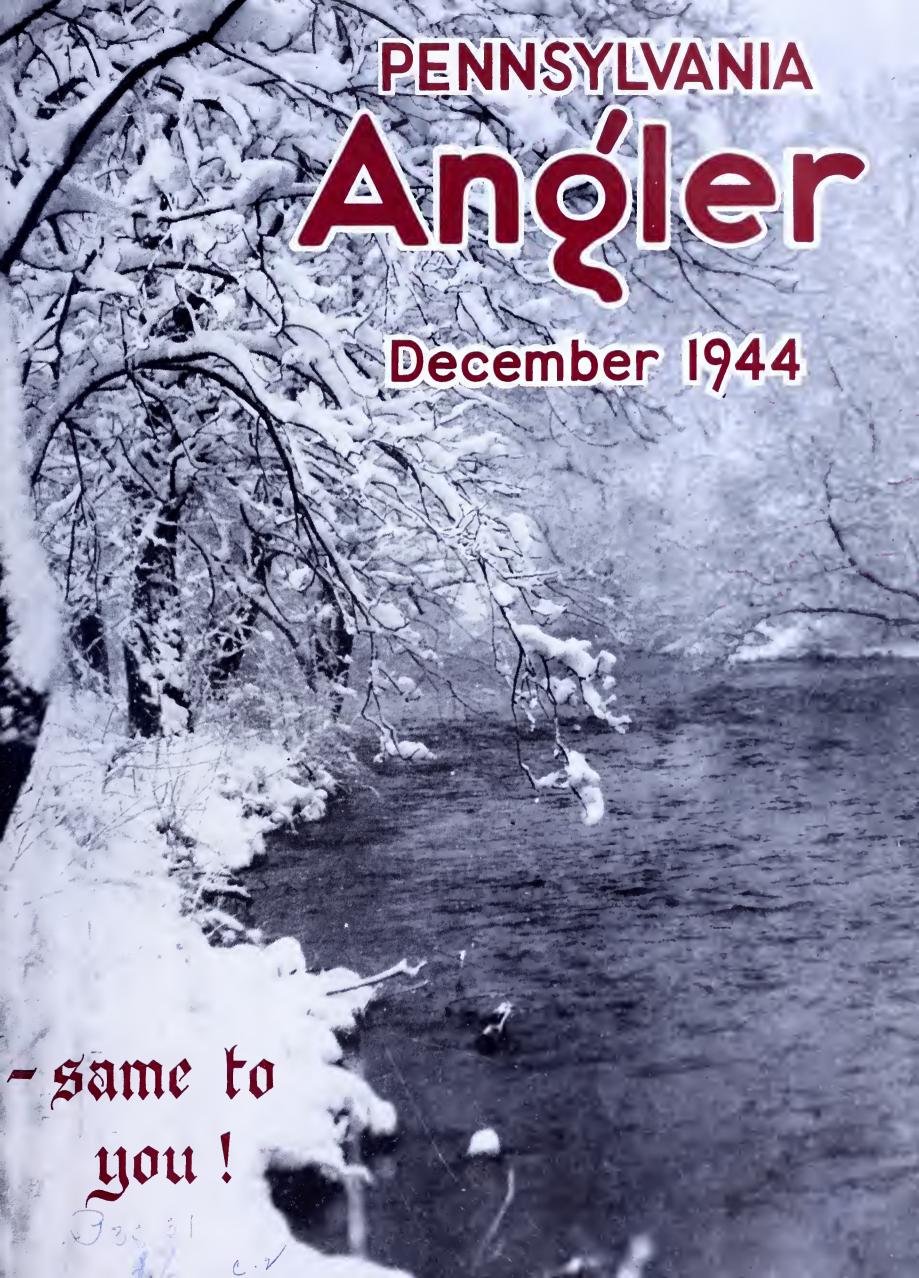
GLEN R. SPENCER

GORDON C. BURDICK

JAMES A. MAY

"I Came Through and I Shall Return"

—General MacArthur





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EDWARD MARTIN

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Cover

"CHRISTMASTIME ON THE YELLOW-BREECHES"

> Photo by Marty J. Meyers, Williams Grove, Pa.

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Truth Is Stranger
By Dick Fortney

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John Brown's Body By Severin W. Laskowski

What the Sportswriters

Are Saying

We gratefully acknowledge and express our appreciation for the many fine letters of comment which have come into us upon the occasion of our NEW COVER STYLE. Your letters have been refreshing and encouraging indeed. We are extremely glad to know that you like the new FRONT and with your continued cooperation and support we shall keep full steam ahead.

And now at this Yule-Tide season may we convey to you our most profound best wishes, best wishes for a speedy and successful conclusion of this terrible war. May we invite you to join with us in more fervent prayer, beseeching our good God in Heaven for the dawn of a new and better day. When the sun in all its glory will again project its rays of warmth and happiness and PEACE. When little children all over the world no longer need scream and shriek and shudder in stark fear. When the rumble and thunder and blistering Hell of far-off battlefronts will be stilled and the whistle of the Victory Train blasts the stillness of countryside as our boys come pouring back home to us again. Yes! It will be a grand and glorious day when these boys have all come home to stay and a million bands begin to play—and then hand in hand together once more—we can all go out fish'n again.

You say—Merry Christmas! We say—SAME TO YOU!

The PENNSYLVANIA ANGLER.

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Fish Commission Honor Roll

THE AMAZING EEL

By W. R. WALTON

THAT agile but, more than somewhat, despised creature, the American eel, Anguilla rostrata Les., is one of the most remarkable and interesting of the fishes inhabiting our waters. Although it rates low in the esteem of sportsmen anglers, the eel of fresh water is a tough, voracious Amazon who puts up a terrific fight and who will devour any creature that she can overcome.

Reference is here made to the eel in the feminine gender because only the female eel is known to enter fresh water. In spite of her snake-like appearance and motions, the eel is a true fish whose scales are embedded in her slimy and gelatinous skin. Through the microscopic examination of these scales, the age of a given specimen may be fairly accurately determined. It thus has been revealed that the eel may survive for long periods and there is at least one, apparently reliable, record of a captive specimen that lived for 37 years. Such notable longevity is quite in contrast with the known life span of the white- or silver-bass, Lepibema chrysops (Raf.), which quite recently has been found through investigations made by Mr. Lee S. Roach* to become senile at the early age of 4 years. Since a 2 pound specimen of this bass was found to deposit no less than 480,000 eggs, its brief lease on life evidently is offset by its enormous fecundity.

Unique among fresh water fishes, the female eel lives for years in inland waters and then makes its way almost to the Caribbean Sea where it spawns but once and then dies. Thus, the reproductive habits of the eel are approximately the reverse of those of such species as the King salmon of the Pacific which ascends streams for as far as 1,000 miles to spawn and then succumb.

For tens of centuries the spawning habits of both European and American eels were shrouded in mystery and were the subject of fabulous tales and speculations. Although it had long been known that eels in great numbers descended to the ocean in Autumn, there to disappear completely, the object of this annual hegira remained unrevealed. In point of fact, it was not until 1777 that the egg-producing organs of the eel became recognized, and nearly a century then elapsed before the male eel was discovered. This occurred in 1874, when Dr. Syrski, of the Museum of Natural History of Trieste, announced his discovery of this sex.

The newly hatched young or larva of the eel, (Figure 1,A) is so very different in appearance from its parents that, when in 1846, it was discovered by Johann Kopp, he



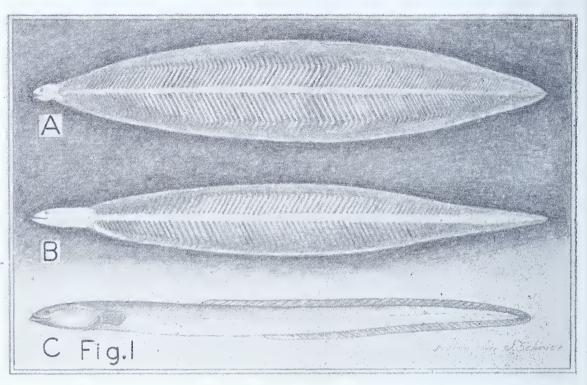


Fig. 1, A. The glass-eel or Leptocephalus; B,An intermediate stage of the eel larvae; C, The young eel fully transformed, as it enters freshwater.

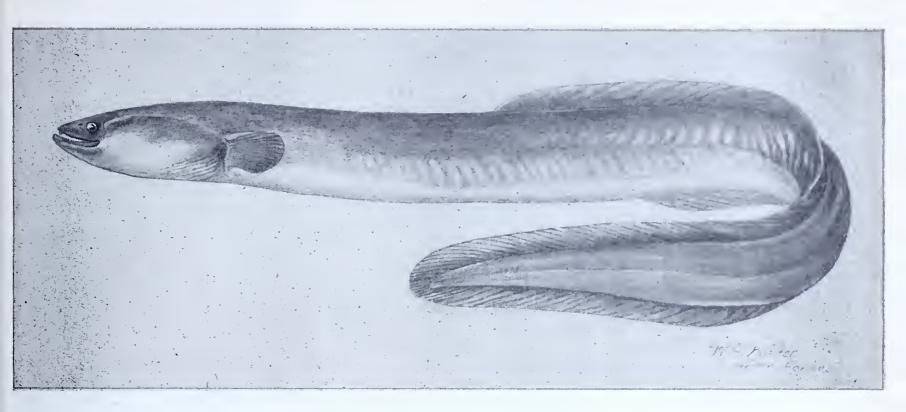
named it as a species new to Science, viz: This was a Leptocephalus brevirostris. minute, transparent ribbon-like, creature, which he placed in a bottle of alcohol where it remained without further notice for half Then two Italians, Messrs. a century. Gracci and Calandrucci, rediscovered this queer little creature, somewhat larger in size, in the Mediterranean. These investigators succeeded in identifying this as the larva of the European eel, Anguilla vulgaris, which inhabits streams throughout Europe. But the place of origin of these young eels was still to be discovered but this was finally accomplished by the dogged determination of a Danish scientist, Dr. Johannes Schmidt, Director of the Danish Commission for Exploration of the sea. Over a period of 15 years this patient and persistent investigator continued to tow nets up and down the Atlantic, taking specimens of larval eels from Greenland and Puerto Rico, and from the Chesapeake Bay to the British Isles. This vast area yielded thousands of eel larvae which were then assorted according to latitude and longitude, in which they were collected. Since these larvae continued to grow as they dispersed from their birthplace towards the coast, he reasoned that the smaller the larvae became, the nearer he had approached to their place of origin. Thus, at long last, he determined this to lie between latitudes 20 and 30 degrees north, and longitudes 60 and 70 west. In other words, in an area southwestward of

Bermuda, in the depths of the so-called "Sargasso Sea," where both female and male eels resort to spawn once, and then die.

The eel is said to lay extreme numbers of eggs, estimated as at least 10,000,000 from a single female. The larvae, ribbon-like in form, and so transparent that news-print may be read through their bodies, float for a time at depths of from 600 to 900 feet in the sea. Later they rise toward the surface and move gradually northward. As they approach the coast, and as the salinity of the water declines, the little eels or "elvers," begin to round out (Fig. 1, B), and by the time they enter fresh water, they have assumed both the cylindrical shape and somewhat the coloring of the mature eel.

Only the female eels enter fresh water, as the males, which never attain a length exceeding 16 inches, remain in brackish or salt environs permanently. The females, however, may travel at least 1,000 or more miles inland, there to remain in fresh water a minimum of from 8 to 12 years before becoming mature.

It is estimated that this journey of the American eels requires a full year, while for those of Europe, 3 years are consumed in the journey from the spawning grounds to their destinations in fresh water. Since the tiny youngsters have no parental aid to guide them, it seems inexplicable how they find their way to their destinations, in some instances, 5,000 miles from their place of



origin. Eels have been found in lakes in Europe at elevations of 3,000 feet above sea level. At the time of entering rivers, the eels are not more than 3 or 4 inches in length.

They may, at this time, be seen by thousands swimming up stream near the surface. Most of such movements are said to occur at night but I have seen these little eels in myriads, on cloudy days above tidewater, in the Potomac River, in late May and early June. According to my notes, one such migration occurred on May 30, 1920. At such times, bait fishing in the river was without results and doubtless the game fish feed largely on these little eels at such times.

The little migrating eels are extremely persistent in their efforts to make their way up stream. An instance in illustration of this fact is related by von Steman, in Germany, where the behavior of the eel has been intensively studied. He says: "Every year from April to the end of June, there appear great masses of young eels in large schools, in the upper Eider, seeking in every way to pass each other." "Where the current is feeble, the procession is broad; but where the eels encounter a strong current it becomes small and presses close to the shore." "The little animals swim eagerly and rapidly along near the banks until they find a place over which they decide to climb. Here they lie in great heaps, and appear to wait the rising of the tide, which makes their ascent easier. The tide having risen, the whole mass begins to separate without delay; eel after eel climbs up on the steep wall of rock, determined to reach the little pools, at the height of 15 or 20 inches, into which some of the water from the upper Eider has found its way. Into these holes the little animals creep and have yet to travel a distance of 40 or 50 feet, under the roadway before they can reach the upper Eider."

Sir Humphrey Davy has sent a similar account from Ireland. He relates that the mouth of a river "was blackened by millions of these little eels, about as long as

a finger, which were constantly urging their way up the moist rock beside the falls." "Thousands died but their bodies remaining served as a ladder by which the rest could make their way; and I saw some ascending even perpendicular stones, making their way through the wet moss or adhering to some eels that had died in the attempt."

Similar acrobatics are related by local historians in Connecticut, notably in the Still River in the basin of the falls near Colebrook line. Boyd, in the annals of Wichester, Connecticut, says: "They may be seen laboriously crawling up every rock which is moistened by the spray of the falls, and endeavoring to reach their ancestral lake or dam."

Eels are abundant in Lake Ontario but apparently are unable to surmount the Niagara Falls, for they are not observed in Lake Erie, or at least were not present previous to the opening of the Welland and Erie Canals. It seems probable, however, that they will reach Lake Michigan eventually through the Chicago Drainage Canal from the Illinois River, as eels seem to be reasonably immune to the effects of polluted water.

When, after some years of residence in fresh water, female eels become sexually mature, they begin their journey down stream toward the sea. Their principal migration occurs in late summer and fall and during this migration, they are said not to partake of any food whatever. At such times their bodies are fat and in the best of condition for use as food for man. Migration is most active on the darkest nights and enormous catches of eels formerly were made in eastern streams when the operation of fish baskets or eel weirs was permitted. The color of such sexually mature eels is said to be distinctive.

It is described as blackish above and silver gray below, and the eyes are said to become considerably enlarged at this time. However, eels vary considerably in color, at all times of the year, in fact, I have caught specimens in April that approximated in color the description above mentioned.

Although there exists considerable prejudice against the eel as a food fish, its economic value is well established and in the markets it usually brings good prices. The eel is perhaps more highly valued in Europe than in this country but its flesh is abundant in fat and is highly nutritious.

Under favorable conditions, eels thrive and grow rapidly. Thus there is recorded, in France, an instance where 2 pounds of young eels were planted in a muddy pond in 1840. In a period of 5 years thereafter, this yielded "5,000 pounds of fine eels."

In preparing eels for frying, it is a good plan to par-boil them first in water with a little vinegar added. This is especially desirable in the case of large individuals that may tend to be strong in flavor.

Formerly, in this country, eels were customarily preserved for winter use in strong salt brine. Their skins have been used in binding books and in the manufacture of that obsolete implement, the horse whip. In the days when hand-flails were in use for threshing small grains, an eel skin commonly was used to fasten the club to the shaft or handle of the flail.

The eel has been known occasionally, to reach the length of 6 feet, and 16 pounds in weight, but such size is decidedly unusual. The size of mature eels usually observed is from 24 to 30 inches and weight up to 2 or 3 pounds. Eels will devour all kinds of water-dwelling animals, either alive or dead, including small fish. They may become especially destructive upon entering trout streams or hatcheries. Soft shell crabs suffer heavily from their depredations, but crab fishermen retaliate by using the bodies of the eels as bait for their crab traps.

Many of these fishermen commonly term the eels "round fish" and despise them as food. The fact that the eel is a scavenger has prejudiced many people against them as food, but these same folks will devour the blue crab with gusto, heedless that this crustacian is even more of a scavenger than is the eel!

Turn to Next Page

Although the two species of eels inhabiting Europe and America respectively, are very similar in appearance and habits, they are considered by naturalists to be distinct. About the only constant physical difference to be observed is that the American species averages 107 joints in its back-bone while its European cousin has a complement of 114 vertebrae. The American eel is said to be distributed along the ocean shores of the Atlantic, from at least the Gulf of Saint Lawrence to Texas and Mexico. It is believed to be absent from Hudsons Bay, the Arctic Sea and the Pacific Ocean.

Eels can live and grow in many waters and whatever the character of the bottom. However, they prefer muddy or boggy areas rather than those that are rocky or sandy. They burrow into mud banks, making dens from which they emerge at night to feed. I have occasionally observed large eels hiding in hollow logs in trout streams and some times have caught them from such streams while fishing night crawlers for trout.

Bobbing for eels in eastern rivers, is fun if not strictly sport, and is a well known form of recreation in some localities. The bait for this purpose is worms threaded on to strong thread. This is then gathered into a cluster or ball which is tied to the end of a pole at least 10 feet long. Selecting a warm, dark night, a boat is anchored in a deep pool known to have a muddy bottom. The baited pole is then lowered vertically to the bottom and the fun usually begins promptly. When the eels strike, this is easily felt, and the pole is then raised gently, the eel adhering, over the boat side. The eel then may be knocked loose if it does not voluntarily relinquish the bait. A pair of woolen mittens is convenient for handling these slimy creatures, which are placed in a gunny sack hung over the side of the boat and well closed with a string. The common black bull-head or horned pout may be caught in a similar manner.

Experienced eel fishermen often use a club to subdue eels taken on hook and line. This may be accomplished by striking it sharply, not on the head, but on the tail, just over, or slightly behind the vent. At this point is located a large blood-vessel and nerve center, commonly called the "second heart." A blow properly directel at this point serves temporarily to paralyze the eel, so that it may be handled, but it will recover in a few minutes and must be disposed of while still hors de combat.

Despite its cylindrical shape and slender tail, the eel is a powerful swimmer, and a large one usually puts up a strenuous battle, when taken on the rod. Occasionally, while bait fishing with the fly rod, wading a stream, I have hung a large eel. In such circumstances the disposal or dispatch of the eel presented a tough problem, as, of course, the landing net was of no service whatever. Almost invariably the eel would have gorged the bait and the only successful procedure was to wade ashore, dragging the eel up the bank, there to hammer its tail and to sever its spinal cord with a knife.

In the British Isles, eels often are caught by a kind of angling termed snigling. This term doubtless derives from the archaic word "snig," meaning an eel. An ancestor of mine (?), one Izaak Walton, describes this phase of his "gentle art" as follows: "I shall therefore conclude this direction for

taking the eel, by telling you that, on a warm day in summer, I have taken many a good eel by snigling, and have been much pleased with that sport." "You remember I told you, that eels usually do not stir in the day time, for then they hide themselves under some covert, or under boards or planks about flood-gates or weirs or mills or holes in river banks." "So, that you, observing your time, when the water is lowest, may take a small, strong hook tied to a strong line, or to a string about a vard long; and then into one of these holes or between any boards, about a mill or under any great stone, or plank or any place you think an eel may hide or shelter herself, you may, and with the help of a short stick, put in your bait, but leisurely, and as far as you may conveniently; and it is scarce to be doubted that if there be an eel within the sight of it, the eel will bite instantly, and as certainly gorge it; and you need not doubt to have him if you pull him not out of the hole too quickly, but pull him out by degrees; for he, lying double in his hole, will with the help of his tail, break all unless you give him time to wearied by pulling, and so get him out by degrees, not pulling too hard."

Although Sir Izaak describes this process as a sport, one of his countrymen, Frank Forrester (Henry W. Herbert) and a pioneer sportsman in America, speaks with contempt both of bobbing and snigling as "practices below the angler." However, this is a case of "you pays your money and you takes your choice," for immediately after condemning these plebian practices, Mr. Herbert describes in detail, a sport which he calls "trimmers." According to his description, this consists in the use of several baited short lines, each attached to a float and allowed to drift freely down stream, the sportsmen following the same in his boat. In other words, almost the exact equivalent of the vulgar practice of "jugging" for cat-fish as it is practiced in the Mississippi Basin in this country!

According to that mid-victorian sportsman Cholmondeley-Pennell, the tail of an eel is used as an effective bait for salmon in a sport called "spinning."

Owing to its peculiar gill structure, which is so designed as to retain moisture, the eel can and does survive for considerable periods out of water. Stories are numerous, and apparently authentic, of its crawling at night over the damp grass and even invading kitchen gardens to feed, in Europe. Such a tale is related by Dr. George Brown Goode, late of the Smithsonian Institution, in his most interesting work: "The Fisheries and Fishing Industries of the United States." An excerpt from this follows: "Bach, in his Natural History of East and West Prussia, published in 1784, maintained that eels frequently are caught in pea-patches in the vicinity of water, where they feed upon the leaves, or according to other accounts upon the peas themselves," and he continues, "these movements explain the paradoxical fact, that in Prussia and Pomerania, fish have been caught upon dry land and by the use of the plow, for the peasants, in warm nights when the eels are in search of the pease, towards the morning when it is not yet day, make furrows with the plow, between them and the water, and these are the nets in which the eels are caught. Since

the eel moves with ease only on the grass, its return to the waters is cut off by the soil which has been thrown up. The peasants consider it as a sign of stormy weather when the eels come out of the water upon the dry land."

Dr. Bertold Benecke, of the University of Konigsburg, who furnished Dr. Goode with the foregoing information, adds in a letter: "A person writes me from Lyck (E. Prussia): "In storms the eels come out into the pea-patches, and at this time people spread sand and ashes around and thus prevent their return, such tales, even now are numerous in the newspapers."

Of course we can not vouch for these stories of foreign origin, but some of you folks who have victory gardens in the river bottoms may wish to get out your shovels and plows, and go fishing for eels, on dry land, some warm summer night.

LYCOMING SPORTSMEN PREPARE TO WELCOME THE BOYS HOME

In a letter signed by W. Boyd Tobias, Chairman of the Promotional Committee, the following suggestions are propounded.

- 1. That we sponsor a dinner for former members of the Consolidated Sportsmen, individual members acting as hosts to former soldiers, sailors and marines, by paying for their own meal as well as that of another. That the program be largely a "welcome home", with former service men recounting hunting and fishing experiences they have had in strange lands.
- 2. That we urge the Pennsylvania Game Commission and the Pennsylvania Fish Commission to prepare immediately for extensive game and fish stocking program in order that excellent sport will be available for exservice men when they return to civilian pursuits.
- 3. That we recommend to the proper national and state agencies that preference be given discharged military service men in employment of help in programs calling for the elimination of contaminating agencies responsible for the pollution of streams adequate for fish life. Also, that similar preference be given in conservation programs having as their object the multiplication of our wild life.
- 4. That we urge that an adequate supply of ammunition and fishing tackle, as well as sports clothing, be made available for exservice men immediately after the war ends. Steps to bring this about should be taken now.
- 5. That we sponsor a shooting school at which the boys may learn to handle sports guns, both rifle and shotguns.
- 6. That we expand the practice of making annual memorial awards, such as has been done in the case of the late Lt. Kenneth Myers, and name for other members of the Consolidated Sportsmen who make the supreme sacrifice, these additional prizes. Such awards to be made, as in the past, at our annual banquets.

Respectfully submitted,

W. BOYD TOBIAS, Chairman, Promotional Committee.

INDEPENDENTLY POOR

By G. A. CLARK

Reprinted from Cosgrove's Quarterly



A FTER he went native Lakin was, I think, the most thoroughly contented man on earth. Lakin was a philosopher—and to your true philosopher nothing in life stands higher than contentment. Contentment's the foe of ambition? Granted—of course, that's true. But—the roaring rush of ambition has two principal products—fame and fortune. Does either of the twain—or both together—bring happiness? Too often the answer is "Nae."

He who drives forward ever faster and still faster, under the constant tension of ambition's goad will, no doubt, attain fame, and quite likely wealth—but will he be happy? As happy as the contented man? He who is blessed with simple tastes, works that he loves to do, an income sufficient unto his modest needs, a virtuous wife and a clear conscience, is indeed richer than many a man of millions.

After all, we're here but a short time—and it's a pretty well authenticated fact that we go down Life's Pike but once—it's a one-way thoroughfare. What's at the end we dinna ken. It may be better going—it's hardly likely to be worse. We may arrive at a dead end. Nothing. Nae mon kens. In any event it'll be all right. It must be. So why not be as happy and content as may be during our short run down Time's Pike—and when we get the checkered flag let's quit without sobbin'.

Lakin was a steel worker and tool maker of parts. He had a little forge and shop and worked when he felt like it—which was nae so often. But what a workman! It was a positive pleasure to shave with one of the razors Lakin forged and tempered —or to use the tools his skilled hands had fashioned. Trouble was to get the skilled hands into action. Had a wee bit o'siller,

had Lakin—and tastes most simple. The two gang weel taegither.

Lakin claimed to be Independently Poor—which, after all, is about as good as being Independently Rich. The chap whose wants are compassed by his income is rich—far richer than many a smug millionaire. A braw fine receipt for happiness—if ye canna increase your income, decrease your expense. It lies within the power of every may jack of us to be Independently Poor—few there be who find riches within their grasp.

Lakin like much better to talk of work than to work. He loved to talk about doing things. Finally, however, he became tired of even talking about work—so he moved down onto the East Branch of the Delaware and went native. Built himself a little tar paper shack with one room, one window and one door. Why more? No man can be in more than one room at once, nor can he look out of more than one window at a time, nor pass through more than one door. Enough's enough! What?

Furniture? A rusty cook-stove with bricks under two corners; a rude bunk; a couple of home-made chairs; a crude but effective still bubbling away in one corner; a basket for the wee Scottie—and a shelf of books. Tristram Shandy, Rabelais, Arnold Bennett, Guest, Walt Whitman, Kipling, Jacobs, and a few others give accurate index of Lakin's habit of mind. A hole in the floor for sweeping and spitting indicates with equal accuracy his housekeeping habit.

Here Lakin lived in perfect content—on eels, onions and whiskey. He had traps into which the foolish eels went unassisted; he made his own likker, and the onions grew without much urging in his wee garden patch. What more can man ask for—

nothing much to do and all day to do it in? An ideal existence for a man like Lakin—who likes it. No artificial wants in Lakin's scheme of things.

Remains always in mind the picture of that camp as we drove away. On the one side the broad, smoothly flowing river; on the other the dark, steeply rising, heavily wooded mountain. A deeply rutted dirt road winding along the base of the mountain. Betwixt road and river the shack. Seated on a stump, placidly smoking a blackened cob pipe—Lakin. He excelled, did Lakin, in placidity. Dress? Two dollars for the lot! Black calico shirt (black for the same reason that Pullman porters are black-a color that doesna show dirt) sans most of the buttons; blue overalls; brogans. Sockless and hatless. Adequately dressed-for the occasion. What more can be desired? Nothing to do and a strong inclination to do it. The Acme of Contentment. Who can say that Lakin has nae the right idea?

(Ed. Note: Since the above writing Bruce Lakin, student of nature, angler, fly tier, philosopher and master craftsman, has crossed the great divide. This marked the passing of a happy and contented man who owed no one and who possessed a property and a handful of change.

The feats of his angling and those of his retrieving Scottie were told and will continue to be related up and down the Delaware River. Moving pictures were made of this combination in operation.)

"I can't find my false teeth," called her husband.

"False teeth!" returned the exasperated wife. "What do you think they're dropping? Sandwiches?"



Elwood A. Rogers, Selinsgrove, R. D. 2, and fine walleye salmon he caught in Susquehanna River at Wyalusing. 30 inches long, 8 lbs. Lure, Junebug Spinner with night crawler.

HOW OLD IS THAT FISH?



Mr. Mock

"How old do you suppose that fish is?" is a question quite frequently asked by a fisherman, after he had landed a nice-sized specimen. In practically every instance there is no answer available.

For a fish biologist, there is no mystery as to its age, for the scales will readily reveal the length of life it reached.

Not only is it possible to determine the age of the fish, but it is also possible to trace the growth of the fish during the different years of its life.

Some years ago Wisconsin conducted a number of investigations to learn the age at which certain species reached legal size. The first thing discovered was that the rate of growth was as different with individuals as it was among the human population and that slow-growing specimens did not reach legal size until two or three years after the faster-growing individuals.

Muskies, it was learned, increased on an average of two pounds per year and that in most instances, were in their sixth year when they reached a length of 30 inches, although some were in their tenth year when this size was reached.

Wall-eyes averaged 13 inches in length at the end of the fourth year. Again, in certain individuals, some had reached their seventh and eighth year before they reached the 13 inch length.

Among the largemouth black bass none had reached a length of 10 inches at the end of the second or third year and half of the group examined had passed their fourth year of age before any had exceeded the 10 inch length. All which were five years of age finally reached the length mentioned.

The great northern pike averaged 16 inches in length, with a few being that long at the end of the third year. Like the musky, they averaged two pounds per year in gain.

The largest musky taken was also the oldest, being $60\frac{1}{2}$ inches in length and 19 years old. It weighed 42 pounds. The largest and oldest wall-eyed pike was 37 inches long. It weighed 10 lbs. and was in its 17th year.

The topnotcher among the largemouth black bass tipped the scales at $7\frac{1}{2}$ lbs., was 22 inches in length and had spent 10 years in its native element before it fell to the lure of a fisherman.

By JOHNNY MOCK All Outdoors Editor Pittsburgh Press

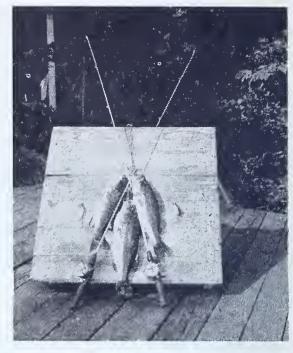
For the great northern pike a whopper of 49 inches in length led the group. It weighed only 20½ lbs. and was 14 years old. The heaviest pike weighed 30 lbs.; was 45 inches long and was in its 13th year.

The largest smallmouth black bass which came to the attention of those conducting the experiment was $26\frac{1}{2}$ inches long and weighed $5\frac{1}{2}$ lbs. It proved to be in its tenth year.

The records reveal that it takes Ma Nature considerable time to raise even a legal-sized fish, let alone a whopper. When it comes to producing the kind which take prizes in the national big fish contests it takes anywhere from 10 to 20 years to produce a winner.

Few fishermen realize or take into consideration the fact that they can destroy in three to five minutes, or even in less time than that, a fish which was 20 years in reaching its size. Under such conditions, the supply can never meet the demand and this the fisherman should remember when he has a day of the proverbial "fisherman's luck."

Judge Gangloff, of Schuylkill County Courts, and three beautiful brown trout—23-24-25 inches respectively. Caught at Pep's Landing, Lake Wallenpaupack.



From the creel of Leonard Smith and Sam Eberly of Laureldale, taken from Twin Lakes smallest weighed 1¼ lbs.





Jimmy Stevenson, 11 years old, of North Warren, proudly displays 14" black bass which he caught at Putnam Eddy, Allegheny River. His brother, Billy, nine, equally as proud, looks on.

POVERTY OR CONSERVATION

Highlights of Vital Importance from a Speech by "Ding" Darling—Honorary President National Wildlife Federation

"Any nation is rich so long as its supply of resources is greater than the needs of its people.

"After that no nation is self-supporting.

"Education in Conservation is the Only Real Road to Success.

"After all these years of effort to find some formula of conservation which would work, I am convinced that until a new generation is taught in the Public Schools man's utter dependence on natural resources, until the teachers of Botany, Chemistry, Biology and Geology emphasize the functions rather than the terminology of their respective sciences; until in fact we have a majority of the American public schooled in the fundamental principles of conservation, criminal waste will continue to reduce our heritage of natural resources. If you will begin to work soon on the youth now in the grade schools, it will not be too awfully late.

"While we are thinking about how we are going to feed the undernourished world there is more beefsteak and potatoes, roast duck, ham and eggs, and bread and butter with jam on it being washed down our rivers each year in the form of good rich topsoil than all the food we export to our allies and distressed populations in any current year. That is a lot of groceries. It may look like nothing but mud to you as it swirls down our silt-laden streams, but it is the very substance out of which our magnificent crops are produced. It is the cream off the top of our continent."

SPORTSMEN WAGE FIGHT OVER STREAM POLLUTION

New Brighton Tribune

The Washington County Sportsmen's & Conservation league, together with affiliated clubs, have recently gone on record as being opposed to continued pollution of Pennsylvania pure streams from deep mines, surface strip drainage or seepage and have notified the state fish commission and the senitary water board of their action.

These clubs are members of the southwestern division of the Pennsylvania Federation of Sportsmen's Clubs which represents more than 25,000 fishermen and hunters and wild life conservationists in western Pennsylvania alone.

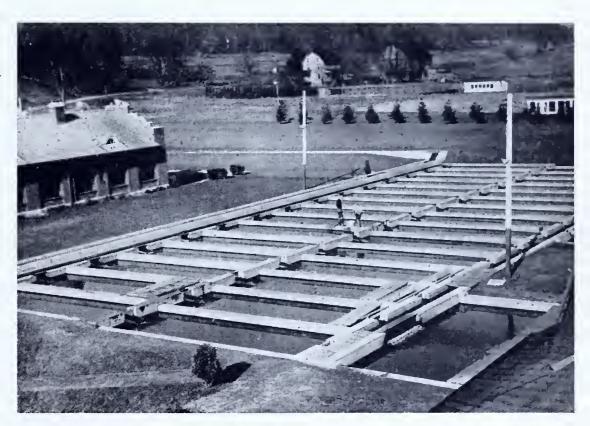
Regarding the pollution of Little Raccoon creek in Washington county, the county organization stated in its resolution that the dumping of mine waters into it is in violation of Section 310 of the Pollution Law of 1937. The resolution committee was composed of J. H. Scott, McDonald; Jules Dubois, Midway, and Warren Columbia, Raccoon.

The southwestern division is made up of sportsmen's clubs from Allegheny, Armstrong, Beaver, Fayette, Greene, Indiana, Scmerset, Washington and Westmoreland and delegates meet quarterly.

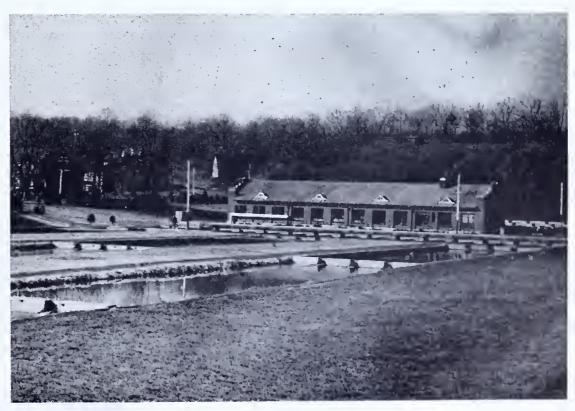
TROUT FARMING

PENNSYLVANIA FISH FARMS

MONTHLY GLIMPSES INTO OUR MAMMOTH
FISH CULTURE PROGRAM



Rearing ponds at the Reynoldsdale Farm into which baby trout are transferred from hatch house in early Spring.



Holding ponds for adult trout at the Reynoldsdale Farm.

TRUTH IS STRANGER---

Some Anecdotes from the Stream That Are True, Even if They Sound a Great Deal More Like Fiction

By DICK FORTNEY



Dick Fortney

J ACK sat motionless on the stern seat of the row-boat drifting silently down the river in the soft shadows of dusk. Ahead of him the mirror-like surface of the stream was dimpled by a couple of busily feeding bass, and as the boat approached the spot Jack carefully lengthened his line with false casts.

Still seated, he sent his cork-bodied bass bug sailing gracefully through the air, dropping it two or three feet from the spot where a good fish had come to the surface for a floating May fly.

The bass took the lure with the characteristic swirl of a husky small-mouth, then plunged like an arrow toward the bottom as Jack set the hook. For just an instant the rod bowed under the strain.

"And then," Jack recalls, "there came that sickening sensation of a slack line, and I knew I had lost the fish. I quickly discovered that somehow the leader had become detached from the line.

"The bass still were rising, so I hurriedly reached into my jacket pocket for a new leader and bug. Perhaps, I thought, I still would have time for a cast or two, although by now it was getting quite dark.

"Then just beside the boat there was a great commotion in the water, sending big ripples out in a widening circle and splashing water almost in my face. Then my bass bug floated on the water, the leader still attached to it. The hooked bass had just leaped and flipped the hook out of his jaw."

I'd like to record here that Jack tied the restored lure and leader to his line, went back to fishing, and hooked a nice bass, perhaps even the one he had failed to hold. As a matter of fact, he did use the tackle again that evening, but by the time he was ready to fish again the rise had ended, and no more fish were hooked.

Two of us stood late one afternoon on a highway bridge across a well known bass creek in Northern Central Pennsylvania. In the fairly shallow water just upstream from the bridge we saw a large sunfish holding a steady position just off the bottom, and it finally dawned on us that the fish was guarding a nest of eggs or newly hatched fish.

We had heard often of the tenacity with which fish of the bass family protect their nests, and here was an opportunity to experiment.

A companion picked up a small pebble from the bridge and dropped it into the water. Even before the stone reached the surface of the creek the sunfish darted in its direction and caught it as it broke the surface, then seemed to carry the pebble to one side and drop it. Two or three times this process was repeated, and after each performance the sunfish would return to its nest on the creek bottom.

I spotted, upstream some 20 feet, a large pickerel on the prowl, and we watched intently, wondering if the pike would approach the sunfish and what would happen if it did.

Apparently seeking a meal of minnows, the pickerel did just that. It got within about three feet of the sunfish, and things happened in a hurry. The sunfish turned abruptly and like a flash darted into the side of the pickerel, striking it a blow so hard that the pickerel was almost turned over.

And then, instead of fighting back, the pickerel got out of that vicinity in a hurry, and the pugnacious little sunfish went back to its guard duty.

Jean and Russ, two friends of mine, were fishing one afternoon on opposite sides of a nice bass pool, using helgrammites as bait. Jean hooked a fairly nice fish which, as bass often do, maneuvered until Jean's leader was thoroughly snagged on an underwater rock, and Jean was forced to break his tackle.

"That," moaned Jean, "was the last leader in my kit, so I guess I'll have to quit until you come back this way and I can borrow one of yours."

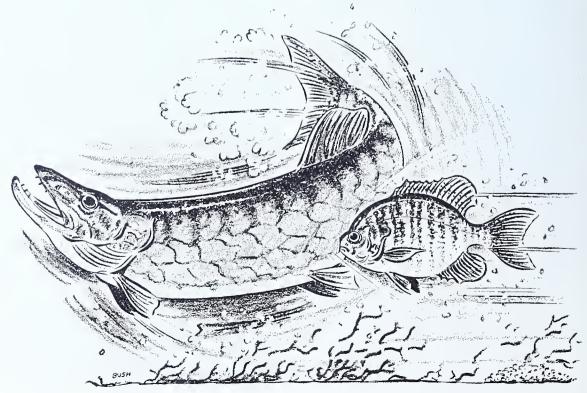
"I'll be right over; it's lunch time anyway," Russ replied.

And about that instant he had a strike and a bass run.

He hooked the fish, netted it after a brisk struggle, then made a careful examination of the fish and finally called across the creek to Jean:

"You won't have to borrow one of my leaders, my friend. You can use your own again."

For in the jaw of that bass a hook was firmly imbedded, and six inches up on the

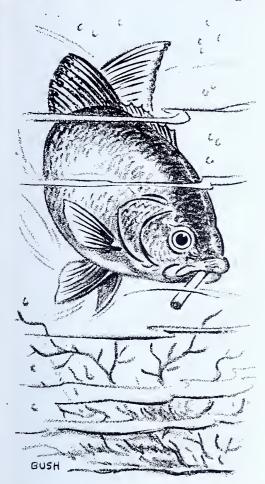


The sunfish immediately attacked and routed the pickerel that approached its nest.

attached leader was a still very lively helgrammite.

Russ had caught the fish Jean lost!

It was one of those sticky, hot afternoons when any sensible angler will put his tackle aside and rest in the shade of a big tree.



The bass took the cigarette and began chewing it.

But Brooks and I had only a few hours to spend on the trout stream, and we continued to fish in spite of the heat.

Quite understandably, the trout had refused to rise, and that fact combined with the heat had us in rather low spirits.

Brooks sat on a flat rock beside the pool we had last fished, puffed thoughtfully on a cigaret, and then tossed it into the water.

"Dick, there isn't a darned trout in this creek," he said. "We'd better go on home. We're just wasting-"

And at that instant a mighty trout came to the surface, took the floating cigaret with a great splash, and disappeared.

And that reminds me of the tobaccochewing bass.

This time the fish were biting well, and we had stopped for a smoke to kind of let the water quiet down.

I had finished a cigaret and threw it into the pool, where it soaked up the water and slowly sank to the bottom.

A small bass approached the butt, took it into its mouth, and then to our amazement proceeded to chew for dear life.

Finally, before our very eyes, the bass opened its maw, spit the badly battered cigaret out, and turned away in search of a more tasty morsel to satisfy its appetite.

I have a big husky friend named Ernie who loves to fish for pickerel in ponds, using a light steel casting rod to send spoons long distances among the weeds and lily pads in quest of action.

We had spent a pleasant afternoon on a little mountain lake. The pike had worked well, and although most of them were rather small in size they had provided us some exciting moments.

Of course, not all casts brought strikes, and Ernie was lazily retrieving a silver spoon when it happened.

There wasn't much more than four or five feet of his line still in the water, and he was about to lift the spoon out for another cast when a torpedo-shaped form shot out from under the boat, smashed into the lure, and spun the reel handles against Ernie's knuckles.

"Wow!" exclaimed Ernie, rearing back and trying to set the hook. Then he turned to me with a sheepish grin on his face.

Bob's father made a particularly long cast and began retrieving his fly with short, sharp twiches of his rod, as was his custom.

Suddenly there was a great tug on his line; his rod arched dangerously, and Bob's father figured he had hooked into one of the monster trout for which this particular dam was widely known.

The battle raged 15 or 20 minutes, deep in the water, and then came to a sudden and unexpected end.

A very large and angry beaver came to the surface of the dam, gave several powerful jerks of its head and an outraged slap of its tail on the surface of the water, and then swam away.

Bob's father had to tie a new fly on the leader that night!

The afternoon sun shone at just the right



The big pike struck just as my friend lifted the lure from the water.

"Why do pickerel do that to me?" he exclaimed almost tearfully. "That darned pike almost scared the liver out of me. I tell you, Dick, it isn't fair when pike hide under a boat and then come sneaking out and try to snatch the rod out of your hands!"

Back in the days when beaver dams were plentiful in the small trout streams of Central Pennsylvania my friend Bob, then just a youngster, often went trout fishing with his father, a devotee of the wet fly.

They were fishing one evening just after sunset in a rather large dam which was noted for its native brook trout.

angle to enable me to see deep into a pool under a highway bridge—a pool which is 30 feet in depth in places and which is the home of some truly large bass and pickerel and a few walleyed pike.

I was watching a small bass nosing about a rocky ledge at one side of the pool when a watersnake caught my attention as it slithered down over the shore rocks ten or twelve feet away.

The snake entered the water and began swimming carefully toward the bass, approaching it from the rear. I reached down and picked up a rock, intending to hurl it

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SNAKES IN PENNSYLVANIA

A Pictorial Review of Serpents Found Along Our Streams and in Our Forests

(Photography by Charles W. Schwartz, Columbia, Mo., and Reproduced Here Through the Courtesy of The Missouri Conservationist) J. A. B.

Concerning serpents there are many things that are true which are as interesting, and in fact as marvelous, as the many myths that are generally accepted. Among these is the fact that some snakes are known to swallow their young for temporary protection, as has been observed and reported to us by several reliable persons. While we have not been so fortunate as to have observed this perscnally, yet we can not deny that certain species of snakes afford temporary refuge in time of danger to their own young, which run down the throat of the parent. It is not known as yet just what species or kinds of snakes have this habit and what do not, but it is known to be true of the Garter Snake and probably also of the Water Snake. Prof. W. L. MacGowan, superintendent of the schools of the city of Warren, reported to us that he had seen a Garter Snake swallow her young for protection no less than four times in his life, and an Erie county school teacher reported that an old Garter Snake with her family of young lived under a bank on the hill near the school house and nearly every day at noon some of the pupils would

go up the hill and frighten the old Garter Snake to see the young one run down her throat. She would then go into a hole and no doubt permit them to escape at once from their living cell.

Professor MacGowan said that in those which he had observed the young remained in the body of the parent about five minutes. It is probable that this habit is confined mostly, if not entirely, to those species of serpents which bear young rather than reproduce by laying eggs. We wish to make further observations along this line and consequently request readers to send us for dissection recently killed specimens of all kinds that may be suspected of having swallowed their young for protection.

Few people know that the Hog-nosed Adder or Blowing Viper has the habit of acting dead or "playing possum" when it thinks there is no other means of escape. This peculiarity is described more at length in one of the following pages.

It does not appear to be generally known that the fangs of serpents when pulled or drawn to render them harmless, will develop and become dangerous again within a few weeks after pulling. If these be drawn, others will grow again, and this will be repeated several times. It is lack of this knowledge which sometimes results in injury for persons who have pulled the fangs of venomous serpents and then considered themselves safe to keep them as pets for some time.

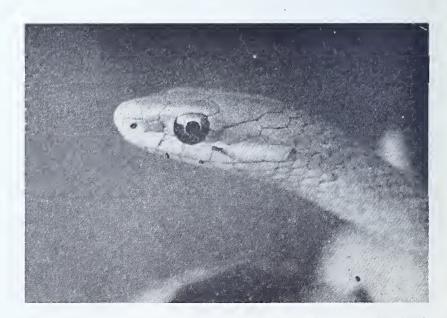
There is a great variation in the colors of snakes, and but few persons know that the young Black Snake is light in color and spotted with gray in such a manner as to be mistaken frequently for the Spotted Adder or House Snake and sometimes for young Copperheads.

The fact that serpents are able to live a year or even more without food is demonstrated in a specimen of Copperhead which we have recently received and which before being sent to us was kept for a year and three months without eating any of the food that was offered to it. It is also interesting to know that snakes are cannibals, as some kinds at times devour individuals of other species.

These Snake Portraits Show Differences Between Poisonous and Non-poisonous Species



The poisonous snakes of Pennsylvania belong to the pit vipers. This portrait of a copperhead shows some of the distinguishing characteristics of this family of snakes. Note the rather large, flat head; the vertical cat-like pupil of the eye and the presence of a pit half-way between eye and nostril.



This grass snake illustrates the characteristic blunt, rounded head and round eye pupil of our non-poisonous species. The plates on the under surface of the tail of non-poisonous snakes are paired, while in the poisonous species found in Pennsylvania they are continuous, like the rest of the plates on the belly.



The timber rattlesnake is the largest poisonous snake in Pennsylvania. It is brown or yellowish in color with brown or black crossbands. Occasional individuals are nearly black.



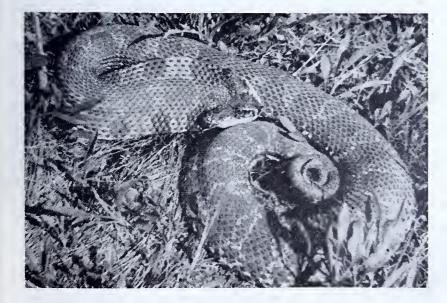
The Copperhead (poisonous) frequents the limestone hills and heavy ground cover in low places and along streams. Note the characteristic "hour-glass" pattern of marking.



The cottonmouth water moccasin (poisonous) is often confused with the harmless water snake, but can be easily distinguished by the characteristics of the pit vipers—broad, flat head, pit, and vertical pupil. In the young cottonmouth (shown here) the markings are prominent, but in adults the pattern is obscure or absent. Large individuals may become nearly uniformly black. This snake frequents sluggish streams and swamps and while rare, is found in South Western Pennsylvania.



Blue racers are common non-poisonous snakes.



The hog-nose snake or puff adder, also called spreadhead, is completely harmless.



The harmless water snakes are common throughout the state.

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SNAKES

Continued

In the text books, snakes and other reptiles are called cold-blooded and there is a common impression that they are truly so, but the fact is that these animals are the temperature of their surroundings. • We have tested this several times recently with a thermometer and can say that the temperature of such serpents does not differ from that of its surroundings where it has remained long enough to become of the same temperature.

Molting or Shedding, and Color

It is often believed that snakes go blind during dog days, and that they are blind once each month at the least, and that molting or casting off the skin occurs each month, etc. There is just enough truth in this belief to keep it in existence. Snakes do molt or cast off the epidermis, or outer skin which becomes dry or hard, and without being shed or cast off the owner could not grow. This molting is generally not more than two or three times a year and depends on the rate of growth of the reptile, which, in turn, depends upon the supply of food. At such times the clear glassy cuticle which passes over the eye, without an opening, becomes loosened from the eye and assumes a milky appearance. It is then that the snake is temporarily blind but only for a short time.

The color of snakes varies greatly, even in the same species and depends more upon the stage of molting than upon anything else. The snake which has recently shed its skin has very bright colors, and as it becomes older it becomes darker and duller in appearance. This molting takes place by the outer skin becoming loosened around the lips and turning backward inside out. Sometimes the entire "skin," or epidermis, is left whole or unbroken. However, at the tip of the tail, around the eyes, and around the mouth, can be seen very plain evidences that it has been turned inside out in the process of shedding. This provides not only for a new coat but especially for the growth of the former wearer.

STRANGE, QUEER FACTS WORTH KNOWING

- 1. Some serpents swallow their young for temporary protection.
- 2. Some snakes play "possum," or act dead, as a means of defense.
- 3. Some snakes lay eggs; others bear young.
- 4. Fangs of serpents are renewed or grow in again after being extracted.
- 5. The young Black Snake is gray and spotted and often mistaken for the Spotted Adder, Water Snake or Copperhead.
- 6. Snakes can live a year or more without food.
 - 7. Serpents often eat one another.

The garter snake probably is the most abundant snake in Pennsylvania. Non-poisonous, and easily identified by yellow stripes.



- 8. Some species of snakes are beneficial as insect-eaters and others as destroyers of mice and other obnoxious rodents (mice, rats, etc.).
- 9. Two-headed snakes are not uncommon. 10. Snakes and other reptiles are not "cold-blooded," but are the temperature of their surroundings.

(Source of information: Serpents of Pennsylvania, Division of Zoology, by Prof. H. A. Surface, Economic Zoologist. Pennsylvania Department of Agriculture 1906.

Billy, son of Edgar C. Weidner, proudly displays 19", 3 lb. Brownie caught by his dad in the Letort at Carlisle.



A fine large mouth taken on a river runt in Little Lake Juliett by Dick Middugh.





A big black mouth salmon caught in Blackjack Creek Wash. by Frank H. Krebs MI/c, a Pennsylvania fisherman now in the service. Weight 21 lbs.

"JOHN BROWN'S BODY"

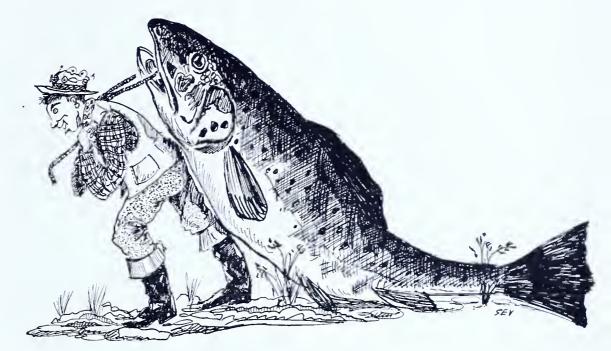
A Fishin' Story That Ends Like a Fairy Tale

By SEVERIN WALTER LASKOWSKI

Ludy's Hole, Sandy Bottom, County Line Riffle, Hogelyn, Elk, Big Sock and Little Sock. Names that fit the places like tastes fit with smells. A trout fisherman from Pogo Pogo, Abarami (if there were such a place) would know them for trout waters merely by the kind of sound they register on the ear drum. Although I'm not from Pogo Pogo that's how they affected me. And so it happened that we left early one morning for Sullivan County. I had been invited as a guest to the Whistle Pig Camp.

The drive up was quite uneventful until we came to that most beautiful of beautiful streams the "Loyal Sock Creek". There it became necessary to truss each other fast with the tow rope, to keep one another from jumping out of the car and commencing the piscatorial pursuit right then and there. Half past twelve daylight saving time we rolled into camp and were cordially greeted by Jim the colored cook. He politely informed us that the boys were out on the stream, and to our urgently put question, "Are they gettin' any?" calmly answered, "Some". That ain't here nor there so as soon as I had set up my allotted cot in my allotted space in my allotted tent, I climbed into my togs and splashed into Elk Creek which tumbled boisterously by the encampment. By way of explanation Elk Creek flows into the Loyal Sock. Almost immediately, although I am a beginner in the fine art of dry fly fishing, I caught trout. It is true they were small trout, so small in fact that I had to return them to the cool waters of the Elk, but nevertheless they were trout. Big trout had been and would be caught in the Elk, but I wasn't gettin' so much as a glad eye from them. In the meantime the wind was becoming stronger and stronger making my feeble attempts to cast even more unsuccessful. Disgruntled but not disheartened, I climbed out of the stream and walked down the road to camp. Upon arrival I became acquainted all around and saw some catches that made me green with envy. After a delicious supper of ham and beans, I accepted the kind invitation of some of the veterans to go with them and make a try at Ludy's Hole.

At Ludy's Hole the "Sock" is wide. At the upper end the entire width of the stream is very deep and swift, but gradually quiets down as it reaches the lower end, where it runs shallow on the near side but deep on the far side. The far side for all its deepness broken into white water here and there by large rocks. I took my time assembling my rod (which is an old crooked one dad gave me) so as to watch some of the old timers in action. After watching for about fifteen minutes my spirits rose zenithward,



elation filled my heart to overflowing. I had it now. All one had to do was cast the fly so that it would drop lightly on the water, and hook Mr. Trout when he rose to take the fly. That's all there was to it, easy as pie.

Being a bashful person I went down stream a good ways in order to mimick unobserved, waded bravely in (with a swagger I believe) and made ready to fill my creel with the specie Salvelinus Fontinalis. An hour later by the sun I had exactly no more trout, and I had a tired wrist. I had learned however, after snapping off several flies at fifteen cents apiece, that I was retrieving my backcast too soon and too fast. It also dawned upon me that it was better to cast the fly high and a little beyond the spot I wished to place it, thereby having it drop on the water, not hit it like a bullet.

As I stood there contemplating the orneryness of trout all specie included, one of the Brown family commenced to feed about twenty, feet in front of me. He or she, it's hard to tell at that distance, was cavorting at the head of a heavy riffle, with a great show of fore and aft. For convenience sake I shall dubb this particular trout with the good commonplace name of John. John Brown was big, so big that for a time I doubted the saneness of my staying in the same stream with him. After idleing down my heart by reducing the spark that was caused by my knees knockin' together, I cautiously sidled toward this Mr. John Brown Trout.

Coming within range I let fly, flies of all

description; I cast to him, everything I had in my book, and although the Sonofagun kept on feeding complacidly all this time, he wouldn't so much as smell anything I threw to him. Then to add to my humiliation the old rascal moved closer and closer as he fed, until he had nearly backed me out of the stream. Several times I was quite afraid he might mistake me for a shad fly Perhaps I should have stood my ground he might have jumped into my creel. It was fast becoming dark, the whippoorwills were sounding taps.

A tired forlorn fisherman dragged himself to camp. He had made acquaintance with John Brown. He coveted John Brown's body. The lantern threw grotesque shadows on the tent walls as we undressed—outside the fire crackled cheerfully, from across the field came the sound of a fawn, baaing for its doe. Tomorrow was the Sabbath.

Sunday I awakened to the incessant tattoo of moisture precipitating itself with gusto upon the roof and sides of our tent. I had intended to visit the local beauty spots and make some sketches, but since it was a bit damp outdoors this plan had to be abandoned. The day was filled eating, sleeping, swapping yarns and grumblin' about the way the streams were risin'.

Monday morning came still cloudy, and cold enough to make us think we had enlisted in Byrds Polar Expedition. The wind whistled through the guts and little valleys with little less than hurricane velocity. The

Turn to Next Page

JOHN BROWN'S-

Continued

wise ones hugged the camp fire but being the kind of fool that will fish with any equipment, in any weather, even in streams known to be devoid of finny inhabitants, I took my rod and sneaked off. Below camp a short distance the Elk converges with the Loyal Sock. As the larger stream takes the smaller in its huge embrace they form another of those deep swift riffles for which the Sock is famous. With grasshoppers I caught some minnows out of a bit of back water. I had used minnows for bass fishing and had always hooked the minnow through the upper jaw. The bass would take the minnow, run a short distance, stop and turn around so as to take the minnow head first and run again. On the second run I could sometimes hook them, Pike did this too. I didn't think trout lying in a riffle would have or take time for all this maneuvering. After a few minutes study I jammed the hook straight down the minnows throat and twisted the hook so as to imbed the barb in the minnows back. With this arrangement I stepped out in the stream, cast out and above me, retrieved, took a step and cast again. As I said before, it was very cold. I was about to give it up when I had a strike that nearly upset me. After a glorious battle in which the fish broke water three times I beached him on a sand bar. A brown trout, fourteen and a half inches. I caught two more on that riffle in the same manner and by that time was so cold that I wouldn't have endured the exposure another minute for all the trout in the county. I had expected to march into camp like the returning hero, to my chagrin those old, "dyed in the wools" didn't even notice my triumphal return. With two cups of scalding coffee in my innards I crawled under my blankets to get warm.

This day too, had its lesson. I learned that to fish bait with a fly rod is liable to warp it, and to fish in swift water without a swivel raises the very devil with your line.

Tuesday, cloudy, slight rise in temperature, appreciable drop in water level, fried trout for breakfast, delicious.

As I swung down the road toward Ludy's Hole my heart was young and gay. I vied with the woodland songsters, in volume if not in sweetness. I had fond hopes of coming back singing "John Brown's body lies a kickin' in my creel". The sun was coming through, so exquisitely did it reveal the bounties of mother nature that I really lost all feeling of animosity toward my worthy opponent. As old Sol chased the mist off the mountain tops so too this glorious revelation, chased all my cares, and like the mists they soon dissolved to nothingness.

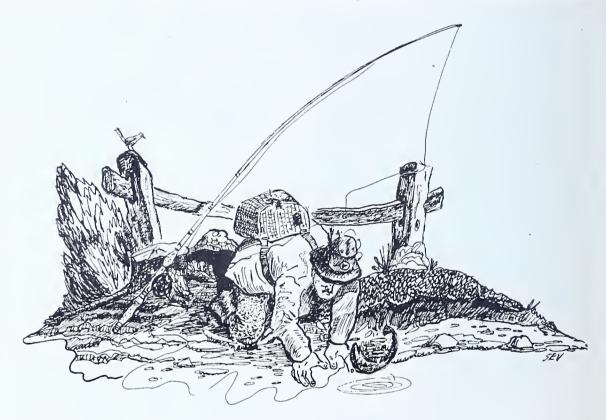
On my second cast I saw John Brown, he didn't rise to my fly but I saw a flash of his broad bronze side as he watched it go by, I think maybe he was trying to get a fin up to his nose and wiggle me a good morning, I knew he had seen me and feeling deeply insulted, I left of my own free will. It was only fair to let him think it over and give him a chance to repent his discourtesy.

Some distance above this well marked spot I managed to land two trout that under ordinary circumstances would have been considered nice ones. In comparison with J. B. they were no more than two sardines. J. B. rankled my soul. Going back I cast in vain, then sat out on the bank with a heavy heart and tried to drown my sorrows in a ham sandwich. As I sat there a fish took a fly so close as to nearly splash water on my sandwich. Now this did make me mad. Keeping my position I somehow or other managed to cast accurately. When the object of my exertion turned out to be a four inch chub my fury increased to diabolical rage. In this heat was born an idea.

Taking the chub I attached him to my line in the method aforementioned and with head hanging in shame at this dishonorable subterfuge I again went forth to attempt to tempt John Brown. At the first cast he took it, broke water in his anxiety. I struck and he was on. Could he pull? Like a team of mules, gradually I'd work him out

rocky pools connected by bubbling gurgling rapids. The sun slipped behind the nearest mountain and still I had only small fish. It looked like I'd have to go back to that old crooked rod again. My hopes rose as I heard and saw a trout rise, but then were quickly dampened as I realized the situation.

The water curved into this particular pool, running close to the bank then shooting out and around a big rock into the pool proper. About three feet out from the bank and lying parallel with the stream, and with one end lying on a large boulder was a good sized pine log. About four feet upstream from this boulder two heavy chunks of wood lay at right angles to the pine log connecting the same with the bank. Chunks of wood, log, bank and boulder formed a box. In this box the trout was rising. I was using a coachman wet fly, when I cast over the pine log the drag of the current on the slack pulled the fly up over the log, not allowing it to get down in the corner of the box. Finding this didn't work, I cast the fly under



of the riffle into shallower water only to have him dash back again with a vicious lightning like surge. My only chance lay in keeping the tension of the rod on him, and keeping him out where he'd have to fight the current. It was only a matter of time now. My arm ached like toothache but I didn't care. Of a sudden the line went limp, and I with it, the slightest relaxing of tension had given him his chance. He was off.

Disappointed? Yes of course. But still there was something nice about having had the battle and the thrills, and knowing the big fellow was still there, would give thrills and chills and heartaches again. Camp would not break for several days, hope had not died in the heart of the vanquished.

At camp I contrived to borrow a rod. Four and three-quarter ounces and straight as a dye. Borrowed it on the condition that I must get one over fourteen inches that evening or forfeit the right of borrowing. After supper I walked up Elk Creek to where Hogelyn joins. Here there are deep

the log. On the second cast he took it, he was hooked. Whoopee! He shot right out of the little box and we had it out in the pool. I finally landed him, just fourteen and one half inches. While cleaning this fish I noticed another rising in almost the same spot, luckily I caught him also, another brown about ten inches.

It was dark and I was far from the road but I didn't care. I could use this nice straight rod just as if it were my very own. That night at the camp fire I had a story to tell, but on second thought I kept confidence with the honorable John Brown.

Wednesday and Thursday were halcyon days, weather and water had improved decidedly, everyone caught trout. In the afternoon Mr. R. the most experienced fisherman in camp and Mr. B., who is also good, each caught a large brown trout, these trout measured sixteen and a quarter and sixteen and a half inches.

When I came into camp about eight-thirty Thursday evening there was much fun about

the fire. Jim the colored cook had gone up the road to get the milk for breakfast as usual. While up there he also bought some maple syrup. On the way back he took slight notice to what he thought was a black calf in a nearby field, and didn't pay anymore attention to it until startled by a snort in the near vicinity of the seat of his overalls. The calf by some alchemy had turned into a full grown black bear. The boys said that Jim came sailin' in, right over the trees and wouldn't have stopped at camp at all if they hadn't caught hold of him.

Friday morn we were all up at sunrise, for it was the last day that we might pursue the finny ones. Camp was scheduled to break on the following morning as soon as the tents were dry. Now that I had become more accustomed to the ways and wherefores of the art, I stepped in the stream and caught a twelve inch one for breakfast. After the morning repast I once more repaired to Ludy's Hole. I was still bent on the capture of John Brown.

I will not burden you with the gloom and despair that filled my day. To say the least and the most, I saw not hide nor hair of old J. B. Maybe some other had caught him. At supper I could eat little, my melancholy was genuine. With a dumb kind of hope I returned to Ludy's in the evening, mostly in order to drive Pop and some of the others down in the car. Two hours later found me sunk deeper and deeper in the pit of dejection, I even offered up a little prayer "Please God can't I have just one more chance, I haven't been fishin' for a long, long time, I might never get to go again". I wracked my mind to discover what crime I had perpetrated that I should so be punished. As the sun sank behind the green blue mountain my hope sank with it. My cheerlessness was short lived however, for as if the sinking sun were a signal for him to commence feeding J. B. made his appearance as he snapped a fly off the surface and flirted his tail at me. It was fast becoming dark, everything I had offered had been ignored. I knew I might as well quit, my prayer was not to be answered, eleventh hour luck had never been mine. Darkness was now complete, those who had come with me were calling. Just one more cast, but what's the use. Oh well! As I went to make the back cast the fly held to something. I was fast, fast to a fish, a big fish. John Brown by Jimminy! What was that about faith of a mustard seed? Unknowingly I had set the hook and set it hard. He had taken it under water, just a fluke, a lucky break. This time I had no trouble getting J. B. out of his own particular riffle. He came out with a dash, right towards me, I went into a panic trying to take in the slack. He went by so close I could feel the backwash. After he had made two complete circles using me as a pivot I contrived to reel in some slack. Although after a time it could be seen that he was weakening he still cut didoes like a buckin' broncoe. With great presence of mind now

that I again thought myself master of the situation, I called for one of those who waited, to fetch a landing net. By much will power and play acting I made my voice sound quite calm and nonchalant, I really felt anything but that, for a trout like J. B. ain't caught 'till he's in the fryin' pan or hangin' on the wall, which ever you prefer. By the time someone arrived to my assistance John Brown had weakened perceptibly. A few last lunges, a quick swoop of the landing net and it was all over.

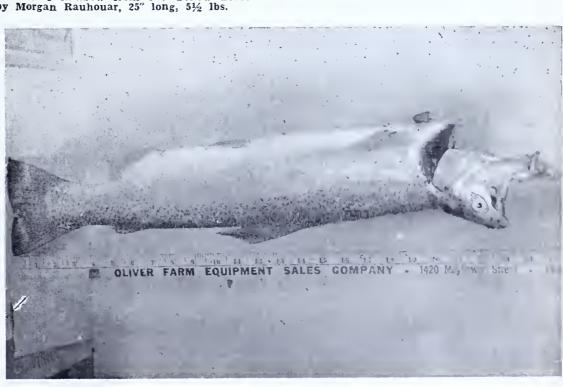
A group of fishermen trudged slowly up Ludy's lane toward the road. Old man Ludy and his wife sittin' out on the porch heard someone lightheartedly hummin' . . . "John Brown's Body."

Wm. G. Wallace, of Kingston, and smallmouth black bass he caught in Susquehanna River at Keelersburg. The bass, taken on No. 7 flatfish, measured 22¼ in. long and weighed 4 lbs., 6¼ oz.



This fine rainbow from the Yellow Breeches by Morgan Rauhouar, 25" long, $5\frac{1}{2}$ lbs.





WHAT THE SPORTSWRITERS ARE SAYING

Kettle Creek Richly Deserves High Rating for Fishing

By HARRIS G. BRETH

Pittsburgh Sun Telegraph

Kettle Creek is one of the famous oldtime trout streams about which patriarchs in the angling fraternity like to regale themselves and "young 'uns" with stories of fabulous catches and battles with giant speckled beauties lurking along its miles of lovely pools and riffles in years bygone. For the most part, while the stories may have become tinted a bit by time, nevertheless, Kettle Creek richly earned and deserved its place in the hearts of fishermen even of the present day.

The fine stream flows down through one of the most beautiful and picturesque mountain masses Pennsylvania can boast. Towering and craggy points, steep sweeping forests flank it on both sides. Here and there every few miles its waters are swelled by the inpouring of smaller streams, just as famous for harboring the wily trout and just as beloved by devotees of rod and line. Hammersley Fork, Cross Fork, Lyman Run, Old Bull, et al are names that conjure fond memories of many treks astream in the minds of readers of this column.

Hidden in Penn's Woods

There was a time when the Kettle Creek country was almost a Shangri La hidden in the deep fastnesses of Penn's Woods. In those days no fine highways had thrust through to connect metropolitan centers and no hardtops had taken the backwoods out of the mud. Getting "in" was a matter of Toonerville trains and buckboards, of patience and planning, but once "in" the rewards were great. Today, almost any old puddlejumping jallopy can make the trip in a matter of hours. And the section is frequented by hundreds of eager anglers instead of the lucky few. Not only for trout, but for bass, because some years ago the lower reaches of this famous stream were stocked with the fighting bronzebacks.

This stocking of bass in Lower Kettle can be argued pro and con, which, however, has become a moot question, the bass are there and there to stay. Nothing short of poisoning the entire section or a heavy bath of pollution will remove them. Yet the bass in Kettle have brought considerable sport and pleasure to hundreds of fishermen in the later months of the angling season who would otherwise have had to lav up their rods and lines. Kettle Creek is the only stream for miles around with bass fishing and every year some surprisingly large specimens have been taken. But for the most part, the experience of most anglers has been in hooking great numbers of small ones, the huge proportion of them just a half inch to an inch under the legal size limit.

Bass, Heavy Feeders

This is due to food competition. Bass are heavy feeders, voracious and cannabalistic.

The lack of food and continued spawning of mature bass has built up a race of "runts" or "stunted bass," which must get worse instead of better as time goes on. Within a short time, if something is not done to correct this condition, Kettle Creek anglers may expect to see runty bass working far upstream in their search for food and survival, and when that happens, this famous trout area can be chalked off the prime trouting list.

A quick and simple way of remedying the situation has been suggested. Since Kettle Creek is far from other bass fishing districts, a special size limit could be set up by the Fish Commission to rid the stream of enough stunted bass to balance the food competition. Where the statewide legal size is now 9 inches . . . bass fishermen on Kettle could be permitted to take and keep specimens 7 to 8 inches in length. Such a regulation would probably be unworkable in prime bass areas, such as along the Allegheny River, but in an isolated district like Kettle Creek it would be an excellent solution and a desirable measure for the management of that famous fishing sec-

ROD-GUN

By EARL KEYSER

So you're not catching fish? Want to know what the matter is? You don't know how to fish.

No less an authority than Thurman Shank, veteran riverman, is responsible for that statement.

And he made it while a group of us huddled about a bonfire of driftwood at his boat wharf at Peach Bottom after a sixhour fishing trip had produced only two catfish, one so small we nearly mistook it for the bait.

We had gone to the river hoping to get a couple of salmon, and we were in high spirits even before leaving the wharf because upon our arrival at Peach Bottom we had come upon "Pop" Nettke, veteran fisherman, who had taken two earlier in the day, the first he had caught all season.

"Pop," who spends every week end at his Peach Bottom cottage, was sunning himself on a bench overlooking the inlet, when we arrived. His dog, "Patsy," was with him and if you think "Patsy" doesn't figure in "Pop's" fishing, just ask him. "Pop" is what is known in those parts as a shore fisherman and, being a shore fisherman, he never leaves "Patsy" behind.

Once "Pop" has cast his lines and set his rods up, "Patsy" takes her place just in back of them. There she stays until a reel sings and then she goes into action. No matter where "Pop" is, he won't miss a strike for "Patsy" won't let him. She barks and jumps and jumps and barks until "Pop" brings in the fish. Then she settles down again to watch the reels.

We put out about 3 P.M. and headed for the end of the tail race at Holtwood. When we arrived there, we found several fishermen, some trolling, others fishing tight lines from rocks in the river. Soon there was quite an assembly of fishermen in the vicinity and we all fished until it was nearly dark. As far as we could determine, no one caught a fish. We doubt whether there were any strikes.

Drifting down the river, preparatory to starting the return trip my companion hooked into a sizeable catfish. I had taken mine earlier before going out into the tail race.

We asked Thurman why he thought no one had hooked into a salmon. After all, September was well spent, the water was in good shape and we were fishing where there were salmon.

Thurman isn't given to talking a lot, especially about fishing, so we were surprised when he finally answered our query.

"Fishermen these days don't know how to fish," he said. Well maybe he had something there, we thought, so we continued to besiege him with questions.

"First place," said Thurman, "there is only one way to catch big salmon and that is to troll for them in deep water. But you must know how to fish the bottom and there are very few fishermen anymore who know how to do that in deep water. There are pools up there (below the tail race) where the water will go 85 to 125 feet and that is where the big salmon are. You can get them if you can fish the bottom.

"I've taken fellows up there myself and often we returned empty handed just because they didn't know how to fish the bottom. Why we should have come in with a boatload.

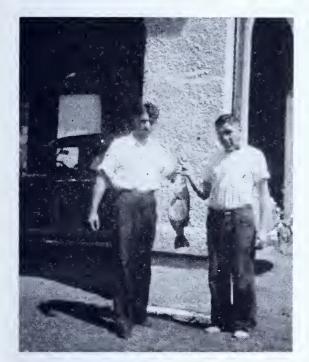
"But fishing the bottom doesn't mean just leaving your bait drag on the bottom. It means knowing the bottom. Every crevice, every tree branch, every obstruction over which you must lift your lure. And you must know when your lure has snagged temporarily or when you have a strike, for the line isn't too sensitive at that depth.

"Then, too, you must coax a strike. You can't just go trolling along and expect the salmon to hit. You must fish where they are and you must fish hard, over and over and over again, if you want to get them.

"The real salmon fishermen were those who made their own lures, often from the family's best silver, and who worked as hard as any man ever worked at any job when fishing for salmon. Why Fite's Eddy is full of silver spoons, good silver, too, lost there by the old timers.

"Sure you can catch fish from the shore, and you can catch them from an anchored boat, but if you really want to get the big fellows you've got to work for them and there are few fishermen these days who are willing to do that or know how to do that."

Camp fires flared on both shores of the river as far as the eye would carry. Flashes of light on the water showed the whereabouts of the boat fishermen. Reluctantly we started for home wishing we knew how to be a bottom fisherman with plenty of good silver spoons.



Joe B. Martin and brother, John, of Philadelphia, display fine large mouth black bass caught by John in Lake Hancock.

Let's Go Outdoors

with SLIM

By RALPH SIDES

On Sunday a friend of mine was wandering around the hills in the upper part of the county and said he saw a lot of chestnut growths. He brought back a twig with a cluster of chestnut burrs and the leaves still fresh and green, and estimated that it would be no trouble to gather a bushel of the nuts, when ripened, in just one small area which he traversed.

This started a discussion about the chestnut blight, and he was of the opinion that it started from the introduction of a Japanese chestnut tree. I readily agreed that he was undoubtedly right, thinking immediately of the Jap beetle, as another Nip infestation.

The Jap chestnut was a carrier of the fungus disease, but was not afflicted with it, just like a human typhoid carrier. The American chestnut trees which were growing prolifically over a wide spread area fell victim to the spores.

The growth looks like mold, and loosens the bark, acting upon it just as when a tree is girdled, cutting off circulation and killing it.



Photo by Floyd T. Oswold, Sec'y Ontelaunee Rod and Gun Club. Dam near Stein's Corner, New Tripoli. Note large fish crane along right shore.

However, the roots would sprout shoots and scrub growths of chestnuts sprung up among the giant ghost standings. These new sucker branches would thrive and grow for about five years, some bearing nuts, then they would succumb to the dread disease and die. This has all taken place well within a short life span, and now it has been the observation of my friend, that each successive growth lasts a little longer. He figures that it might be well to experiment by planting the seed over rough areas owned by the state, and after these trees bear, use the nuts to plant more trees, and so on down through the years. In this way, it is his belief that an eventual immunity might be established, and by so doing, we will be able to reinstate the great American chestnut tree once again to our forests.

The recent rains have not stirred the river up too badly as many had supposed, excepting for where streams empty into it, the water is in fair condition.

The temperature of the water is apparently cool enough to settle sediment quickly, so there shouldn't be long waiting for it to clear, unless we have torrential storms. The fishermen have not, however, reported good catches.

George Kegel, Lancaster (fish man), said he caught a couple bass on artificials out from Perryville recently, one weighing about two pounds. It is his opinion that the fishing in this stretch will not get good until the water gets higher which would result from the opening of flood gates of the dams, and scour the deep holes where he thinks the fish are idly lying.

Earl Parmer, (Lancaster County bank) prefers small stream fishing where he can wade and cast a fly line for bass. He has met with some success on the Octoraro. He favors feathered streamers and artificial flies, not bright colored. He said a bass isn't as choosey as a trout and will bite on most anything. Earl doesn't keep what he catches, but returns them to the stream, as he explained he is only out for the sport and not the meat.

Louis Lecher, 424 S. Prince Street, caught four nice salmon ranging from 15 to 20½ inches, fishing with minnows in the Big Conestoga near Rock Hill.

This column received the following letter: Dear Slim;

In you numerous letters the report was from time to time that the dams on the Susquehanna are not yielding any salmon at this time and for myself I found it true, but last Sunday I was rowing up river from Fishing Creek when I met two men coming down and I asked if any luck, and to my surprise they held up a beautiful string of salmon and good size also. I would say the stringer had about eight or nine good fish on it. This was unusual and I found out later that the one gentleman was none other than Jake Snelbaker from West Willow, an old timer on the river around fishing Creek and one of the most successful fisherman on the river. In fact several years ago the late I. H. Nolt, from Willow Street, told me that he is beyond doubt the best fisherman on the Susquehanna River. He seems to catch fish consistently, in fact, that time he lifted a string of bass that would envy any fisherman.

I am sorry that I did not recognize Jake last Sunday as he is always so friendly and a sport in every way. I believe that he fishes entirely with artificial lures and next time I am at Fishing Creek I will surely take a look for him as I would like to see him and have a chat about fishing.

Yours,

JOHN.

OUT OF THE MAILBAG

Dear Editor:

I should like to report to you an exceptional catch in my county. On November 5, 1944, and on the York side of the Susquehanna River, Edgar Boyd, who lives at Manchester, caught a fine Susquehanna Salmon. This fish measured 29 inches long and weighed 6½ lbs. The salmon was taken on a shiner at Peach Bottom and Mr. Boyd was fishing from the shore.

Very truly yours,

JOHN S. OGDEN, State Fish Warden.

Good Things in Fishing Tackle Looms with Postwar Developments

New Plastic Film May Mean Transparent Lines, Better Leaders,
Finer Tackle

Raincoats so light and thin that they can be slipped into a woman's hand-bag, and inexpensive awnings that neither fade nor wear out are two of hundreds of post-war products to be made from a unique new material announced recently by John W. Thomas, Chairman and Chief Executive of The Firestone Tire and Rubber Company.

The material is a plastic film, which can be made as thin as a hair and as soft and flexible as fine cloths, yet which is comparable in strength to metals.

Lampshades that can be cleaned with soap and water, aprons that can be washed and dried exactly as are the dinner dishes, and portable bathtubs that can be folded like Army cots are a few other products which can be made from the new film.

'The film is the newest member of Firestone's Velon plastic family, which already has been thrown into dozens of important war jobs ranging from screening for American jungle fighters to lenses for gas masks, and which eventually will be used for a wide variety of products ranging from woven fabrics sheerer than the finest silk to shoe soles tougher than leather.

Stitched with an electronic sewing machine that substitutes heat for thread, as well as being stitched in conventional fashion, the Velon film also can be sprayed or brushed on textiles and paper to waterproof and strengthen them. It was developed to protect aircraft engines from moisture during their journeys to the battle-fronts.

Velon film comes in colors so brilliant that draperies, upholsteries for dining room and outdoor furniture, and even wall-paper eventually may be made from it.

On the technical side, the film is elastic, flexible, odorless, tasteless, non-soluble in water, and particularly resistant to scuffing, snagging and tearing. It can be furnished in sheets as fine as one thousandth of an inch or in heavy slabs, and is unharmed by oil, acids and grease.

SPORTSMEN SELECT EVANS AS PRESIDENT

Promotion of Hunting and Fishing is Aim

With the assistance of eight Game and Fish deputies from all over the state and the presence of over sixty sportsmen from New Bethlehem and surrounding communities, the sportsmen of New Bethlehem met at the First National Bank and organized a Hunting and Fishing club. Although no name is to be chosen for this club until the next meeting it will, however, be the same kind of club that New Bethlehem had many years ago, and will strive to carry on the tradition and the good work which the former club did.



Morgan Rauhouser with his 25-inch, 5½ lb. rainbow trout caught in the Yellow Breeches.

The first meeting was highly successful and was dotted with such notable Game and Fish commissioners as Hayes Engle of Oil City; John Hellifinger of Irwin; Floyd Beck of Venus; John Sedan, game technician, of Erie; Fred McKean, of New Kensington, who serves as a member on the Fish Commission board at Harrisburg; Charles Wensel of Clarion, and Dave Pallock, who is the president of Clarion Bucktail Association. All of these men spoke to the sportsmen on the value of having such a club and what the Pennsylvania Commissions and duties these men were doing and stressed the fact that a million sportsmen are expected to be in the woods after the war is over and if there is to be enough game and fish for all, then a club of this type is necessary to help see that it will be there. Mr. Fred McKean also pleased the men with his witty humor in his talk of telling how many fish the Fish Commission planted in the waters of Pennsylvania and also the cost of raising

After the talks, the meeting was turned over to the local sportsmen and they quickly organized their own club electing Harry Evans, game protector for this area, as their President, and Charles W. Hetrick, a school teacher of Fairmount City, as Secretary. Mr. Evans quickly called the meeting to order and appointed a committee of such notable sportsmen as Dr. C. V. Hepler, James Martin, Clarence Boyer, C. W. Anderson, Bucky Hayes, and James Wilkinson to draft a name for the club. The sportsmen also decided that the dues for joining this club will be sixty cents and that any man or boy of New Bethlehem and surrounding communities is eligible to join.

At the close of this meeting a door prize of a box of twelve gauge shells was given and won by Chick Shaffer. All members were then asked to get as many boys and men as possible to join the club and be present at the next meeting to be announced in the newspapers.

Leader-Vindication, New Bethlehem, Pa.

Jones entered a department store to buy his wife a birthday present. He asked a saleslady just where he could find some nice silk stockings. "Go to Helen Hunt," she replied.

OUTDOORS CALLING

Day on Stream and Lake

By BILL WOLF
Philadelphia Record

Something happened to summer the other morning and winter showed up in its stead when we went fishing. There was quite a chill in the air and it seemed to increase as the day wore on, rather than decrease.

We set up tackle along the stream to the noisy comments (probably uncomplimentary) of crows which are flocking up. Crow shooting should be good soon and give gunners some practice before small game season

opens-if they can get shells.

The water was cold and the fish seemed to mind it. There was little activity in the stream. Even the chubs weren't feeding. This is a discouraging sign, but we fished a good long stretch before convinced that nothing much was doing. Jack Morris stayed at the pool where we started, I fished one bit of water hard some distance below him and Gunnis traveled on downstream. We caught only two small bass, although I cast endlessly to some large ones I could see lurking around an undercut bank. Best I got were some follows.

We waded through shoulder-high goldenrod and briars back upstream where we
found Morris fishing with bait because he
had broken the middle joint of his fly rod.
We decided to go across to Springfield, and
Charley and I netted some minnows in a
tiny stream. While working the net up
the brook, I was startled by a muskrat that
almost got caught in the mesh. It swam
ahead of me, penned in by the banks and
the net, so that I could have scooped it up
easily. It finally reached one of its underwater holes.

AT THE RESERVOIR. We had sand-wiches and hot coffee before starting over to the reservoir. Both tasted good in the cool air. The sun tried to shine, but had that pallid look of winter about it. It won't be long until we will see the sun as a faintly yellow spot in a gray sky.

The usual fishermen were about the upper bridge when we arrived. No one seemed to be having much luck. This reservoir is practically a wildlife factory and there were black ducks on the water, a hawk in the air, crows lining the shore and small birds everywhere. It's an interesting place.

Our luck was slightly better than on the stream. The bluegills were slow to strike,

Turn to Page 20









19

PAPPY GIVE ME THET NAME ON ACCOUNT O' ME LIKIN' APPLE CIDER SO MUCH ...









MEANWHILE .. BACK AT CIDERS HOME WE MEET HIS PAPPY

I WELL DOGGONE IF THET KID O' MINE DIDN'T LEAVE HIS APPLE CIDER HERE AN' TAKE MY JUG O' CORN LIKKER WITH











TRUTH IS STRANGER

From Page 9

into the water and alarm the bass in time to save its life—but my help was not needed.

From the green depths toward the middle of the stream appeared the shadowy form of a huge pike. It paused as if sizing up the situation, then suddenly started for the water snake. Vibration in the water must have warned the reptile, for it turned away from the bass, curled its way like a streak through the water, and barely managed to reach the safety of the shore in time to escape its attacker.

And then, finally, there is John and his stream-made trout rod.

We had driven one afternoon some 25 miles from home for a bit of after working hours trout angling, and when we had pulled up at the side of the creek and were drawing on our boots John made a chilling discovery.

"Dick," he said. "I left my rod at home!" We were stumped. Because it was only a short trip, I had not carried along an extra rod. so there we were.

I offered to share my rod with my friend, taking turns with him in using it, since we had neither the time nor the gasoline for a return trip to the city for his missing tackle.

"Nope," replied John. "I made the mistake, and I'll suffer."

And then he had an idea.

"I wonder," he said, half to himself and half to me, "if I couldn't rig up some sort of a rod right here along the creek. If I remember rightly, there's a clump of young willows down around the bend. You go ahead and fish, and I'll see what I can do."

We separated, and I didn't see John again for an hour. And then he had a big grin on his face—and a rod in his right hand.

And, what's more, even while I watched he cast a dry fly and hooked a fairly nice brook trout.

"Where did you find the rod?" I called. "I didn't find it; I made it," he replied. And that is just what he had done.

He had cut a willow pole about eight feet long and nicely tapered. In the thick butt he had cut a notch into which the seat of his reel fitted well. Then he had tied the reel in place with short pieces of his fishing line. With other segments of line he had attached three loops along the length of the rod, with a final loop at the tip.

Through these loops he had threaded his line, attached the leader, and gone fishing.

He admitted that handling the rod was a bit hard on the wrist and that the line didn't shoot out so well through the makeshift guides.

But he had some nice trout anyway—and when we started for home he carefully leaned the rod up against a tree in the yard of a farm house nearby where we had seen a small boy industriously cutting grass.

"Maybe the youngster can use it some day," John grinned.

Truth is stranger than fiction!

Men are peculiar. A fellow who hadn't kissed his wife in five years shot a fellow who did.

IN A SPORTSMEN'S CLUB

Boisterous laughter, agreement, or strife, Tobacco smoke you can cut with a knife, Tales of achievement by expert and dub; You get all these free—in a sportsmen's club!

Big Game lectures—the "chase" and the "kill."

With movies for proof, you get quite a thrill, A voice from the rear calls—"Down in front, Bub!"

You get all these free-in a sportsmen's club!

Reports of a bountiful stocking of Game, "Baloney"—yells someone, and you say the same:

You hear where they "hid" all those Bass, Trout and Chub,

And all of these free-in a sportsmen's club!

Outdoor meetings—late Spring until Fall, Trapshoots and plugcasting—prizes for all, Meeting's adjourned! And you reach for free grub—

What more could you ask—from a sports-men's club??

By THE PERKIOMEN POET.

It is possible for a trolling or casting spoon to be too glossy, to glitter so much that fish realize it is artificial. The remedy is simple. Just use a bit of emery paper to take off the high gloss and to give the lure a satin-like finish. The same process can be used on spinners for the fly rod.

The minnow is the last resort of many bass anglers because minnows are hard to catch and difficult to keep alive, and they also are fragile. But in the final analysis, remember that the minnow is definitely the favorite food of the bass family.

Rastus: "Brothaw president, we needs a cuspidor."

President of the 8-Ball Club: "Ah appoints Brothah Brown as cuspidor."

Do Not Send Stamps

OUTDOORS CALLING

From Page 18

but we managed to get a few and I had one large one on. Strangely enough, the bluegills usually don't get large in this lake; at least, those that live along the shore where the public may fish aren't big. Another thing, even the small ones won't strike or follow the streamer or fly when there is a ripple on the water. They hit best when the lake is mirror-still.

The lake is low, lower than we have seen it for some years. The bass weren't very active, although an occasional tremendous splash far out would mark some feeding exploit. I took a small one, but had more fun with the yellow perch which started to follow and hit a yellow tiger I had on. The perch is a good fighter.

Once I had a follow that put my heart in my throat. The fish didn't hit or show on the surface, but it raised a wave behind my lure that indicated it was huge. It happened again at the same spot; but it didn't hit.

IN EVENING. Toward evening a plug fisherman, Sam Smith, took a nice bass on a River Runt; but that's all the luck he had. I tossed a cigarette in the water, a fish struck at it, so I dropped the streamer there and picked up a bright long-eared sunfish. Toward evening the wildlife activity around the lake increased.

An owl started hooting at a great rate in the pines, the crows got noisier, a flock of nine black ducks passed overhead and settled on a mud bar. Then a lone duck came in and one of those already on the lake set up a gabbling clatter to greet it. Charley thought it might be the old man coming home late to get the devil because of his lame explanations.

A cool, wintry sunset provided a backdrop for the night birds which came out and, thoroughly chilled, we started home.

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*--Made Supreme Sacrifice.

"I Came Through and I Shall Return"

—General MacArthur

...IT HAS BEEN SAID ...

"We Can All Live on Less
When We Have More—
To Live For!"

公 公 公

LET'S MAKE THIS THE LAST CHRISTMAS IN FOXHOLES

 $\Rightarrow BUY BONDS \Rightarrow$ HELP BRING THEM BACK

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